BOARD MEETING

STATE OF CALIFORNIA

INTEGRATED WASTE MANAGEMENT BOARD

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Evan Edgar, CRRC

Gerard Kapusuk, Ventura County Environmental and Energy Resource Department

Gary Liss, Gary Liss & Associates

Brian Mathers, Alameda County Waste Management Authority

Bill McGavern, Sierra Club

Scott Smithline, Californians Against Waste

James Stewart, BRI Energy

Jane Williams, California Communitites Against Toxics

Rob Williams, University of California Davis

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PROCEEDINGS

CHAIRPERSON MARIN: Good morning. It's a little bit past 9:30, but we're going to start as close to the time as possible.

Would you please call the roll?

EXECUTIVE ASSISTANT JIMINEZ: Mulé?

BOARD MEMBER MULÉ: Here.

EXECUTIVE ASSISTANT JIMINEZ: Paparian?

BOARD MEMBER PAPARIAN: Here.

EXECUTIVE ASSISTANT JIMINEZ: Peace?

BOARD MEMBER PEACE: Here.

EXECUTIVE ASSISTANT JIMINEZ: Washington?

Moulton-Patterson?

BOARD MEMBER MOULTON-PATTERSON: Here.

EXECUTIVE ASSISTANT JIMINEZ: Marin?

CHAIRPERSON MARIN: Here.

We do have a quorum. And I know there are a couple of people working on one item, so we're going to start with Item Number 3.

And welcome. It's nice to see you here today, Caroll.

LEGISLATIVE AFFAIRS OFFICE ASSISTANT DIRECTOR MORTENSEN: It's good to be here.

CHAIRPERSON MARIN: Leg and all.

LEGISLATIVE AFFAIRS OFFICE ASSISTANT DIRECTOR

MORTENSEN: Yes. I was attacked by one of our regulated commodities. So look out for those tires, because they'll come and get you. I'm lucky it wasn't a garbage truck.

I just wanted to bring a quick update for you. I'm Caroll Mortensen of the Legislative Affairs Office, and I wanted to provide everybody a quick update on what's happening with some of the legislation we've been working on this past year. As you know, the session ended on August 28th, and we have a lot of bills that have been either signed or vetoed by the Governor. We still have a few that are pending on his desk. But I thought I'd go through really quickly and give you the highlights of what we know so far.

I'll start out with the bills that the Governor has vetoed to this point. There were two energy-related bills, AB 2311 by Assemblymember Jackson and SB 1851 by Senator Bowen. Slightly different bills, both dealing with energy efficiency and sustainability. The Governor vetoed both those bills with veto messages indicating that we have the existing Executive Order dealing with sustainable building that's still in effect and he wants us to continue working within those parameters, as well as working on ongoing initiatives out of CalEPA, as well as the Governor's Office, on sustainable building issues.

Now, bills that have been signed by the Governor,

AB 2159 by Assemblymember Reyes. This was the bill dealing with enforcement issues that arose out of the fire that happened down in Assemblymember Reyes' district, the Crippen fire down by Fresno. This bill was signed by the Governor and is going to give the Board a couple more tools in its toolbox as far as appeals and notices and orders and would pretty much put an end to the appeal upon appeal upon appeal issues that we've had with some out-of-compliance facilities. So that was a very good thing for us.

AB 1873 by Assemblymember Hancock, the Governor also signed this into law. That extends our RMDZ Zone Loan Program from July 2006 to July 2012. So we'll still have that program -- very successful program to implement.

And SB 1729 by Senator Chesbro dealing with the rigid plastic packaging container program. This is the bill that would -- now we don't have to calculate the recycling rate every year. It will be done on an audit basis, which is a big step forward for our plastics program, but we still have a lot of work to do on that issue.

Also, the Governor signed SB 1749 by Senator Karnette. This establishes a truth in advertising law for plastic bags that use the terms biodegradable, compostable, or degradable. It doesn't have an enforcing

agency tied to it, but it would allow people to file suit against bag manufacturers who claim that their bags are degradable, compostable, or biodegradable, if those claims are not true.

We still have a few bills pending on the Governor's desk, including AB 338 by Assemblymember Levine dealing with rubberized asphalt concrete. This is the bill that would place a mandate on Caltrans to use increasing amounts of rubberized asphalt concrete in their highway projects. And we're looking forward to the action on that bill by the Governor.

AB 736 by Assemblymember Hancock. This is a bill that would require the State Allocation Board to develop regulations for design standards set forth by the Collaborative for High Performance Schools, or the CHPS Program, for any new school bonds and schools built with those bonds after 2006. That's still pending.

AB 923 by Assemblymember Firebaugh. This is the bill that was sponsored by CalEPA and the Air Board that would increase the tire tipping fee 75 cents, with that 75 cents going toward air pollution control programs, including the reduction of particulate matter. That bill is still pending.

And AB 2176 by Assemblymember Montaez. This is a bill that would establish a large venue recycling

program and require local governments to do some reporting and estimation on the amount of waste generated by large venues in the district and to begin to develop programs to address that.

AB 2633 by Assemblymember Fromer. This is the bill that we affectionately call the grease bill. As it was going through the process, it was going to have the Waste Board be responsible for both tracking and permitting of folks that handle interceptor grease. At the end of the session, they took -- they amended the bill to have those same responsibilities be performed by the Department of Food and Ag. That's still pending.

Also SB 50, this is the cleanup bill to the Electronic Waste Recycling Act from last year that would move the fee collection date back to January 2005 and would also provide continuous appropriation of those funds for us to make payments to recyclers and collectors and to various other cleanup measures.

So there's a couple bills that didn't make it out of the Legislature that we were watching that we think probably may be issues for next year as well. The top two were AB 1699 by Assemblymember Laird and SB 1180 by Senator Figueroa. These are the two bills that dealt with the management and disposal of fluorescent tubes. They both would have placed a fee, slightly different scale

depending on which bill, on the sale of new tubes to finance collection and recycling infrastructure for these universal waste that after 2006 won't be able to dispose of in a solid waste landfill.

That's just a very quick overview. And we've obviously tracked a lot more bills this year, but those are the top highlights. But I'd be happy to take any questions.

CHAIRPERSON MARIN: Thank you, Caroll. That was very nice. I'm so glad -- I know you work very, very hard throughout the year for all of our bills and keeping watch over them. So thank you so very much. We missed you yesterday. We're glad you're fine.

Before I go any further and before anybody asks any questions if they have any, I do want to let the record show that Mr. Carl Washington came in while you were giving your presentation. So we're so glad to have him here.

And the other thing I would like to ask is for ex partes, if everybody is up to date.

Ms. Patterson.

BOARD MEMBER MOULTON-PATTERSON: I'm up to date.

BOARD MEMBER PEACE: I'm up to date.

BOARD MEMBER MULÉ: Up to date.

CHAIRPERSON MARIN: Mr. Paparian.

BOARD MEMBER PAPARIAN: I'm up to date.

CHAIRPERSON MARIN: And Mr. Washington.

BOARD MEMBER WASHINGTON: I'm up to date.

CHAIRPERSON MARIN: So am I.

Now we are going to go to questions. Are there any questions or comments for our Legislative Director?

BOARD MEMBER PAPARIAN: Madam Chair, I'm sorry. I should report an ex parte. I talked to Yvonne Hunter last night and again this morning about Item 11.

CHAIRPERSON MARIN: Thank you. That's very nice.

I don't see anybody wanting to make any comments.

BOARD MEMBER WASHINGTON: Madam Chair.

CHAIRPERSON MARIN: Yes.

BOARD MEMBER WASHINGTON: I would just like to welcome Caroll back and thank her for the presentation. She did an excellent job in our Public Outreach and Education Committee. And, again, I want to thank her for the hard work that she and her staff is doing to track all these bills.

And I gave an analysis at our Committee as it relates to just so people know the type of work that they do. Over in the Legislature, we have about 346 attorneys that do what six of them do in our Legislative Office. So I want to thank her for all the hard work that she does and her staff. And glad to see you back.

CHAIRPERSON MARIN: Great. Thank you.

Moulton-Patterson.

BOARD MEMBER MOULTON-PATTERSON: Thank you. Just want to add on to what Carl said.

We had a great report in Committee also. And I said it then, but I just want to say it at our Board meeting. Our office worked very closely with Caroll and her staff. And you guys do a terrific job, and you have so few people doing that huge job. Thank you so much. And as I said at Committee, it's been a pleasure working with you on legislation. Thank you.

CHAIRPERSON MARIN: Yeah, do you want to say something?

BOARD MEMBER PEACE: Just say ditto that. They do an excellent job.

CHAIRPERSON MARIN: Thank you.

Caroll, I know you have tasked us with a little challenge by tomorrow, I think, is it? Any proposed great ideas that we may want to have.

LEGISLATIVE AFFAIRS OFFICE ASSISTANT DIRECTOR MORTENSEN: Yes. That's true. The Governor's Office last year during the transition -- usually annually the Governor's Office asks for legislative concepts and proposals. And with the change in administration last year, we didn't do that. But this year they, albeit a

little late, are requesting some suggestions from us. So we'll see how that goes for the upcoming year.

CHAIRPERSON MARIN: And they have given us very specific parameters; right? You cannot ask for millions of dollars.

LEGISLATIVE AFFAIRS OFFICE ASSISTANT DIRECTOR MORTENSEN: Yep.

CHAIRPERSON MARIN: Okay. Thank you. Hopefully our Board members will be inclined to come up with good suggestions for legislative purposes.

So thank you, Caroll. Very great work. Thank you.

The next item we're going to deal with is a little bit of left over from yesterday. And I'm going to call on Chairwoman Cheryl Peace to talk to us about that particular item, since it was part of your Committee.

BOARD MEMBER PEACE: Okay. As we heard yesterday from Jim Lee the changes that we had proposed in Committee, I guess what I'm concerned about is since we didn't get a revised item, I just want to make sure that all the things we mentioned yesterday are clear before we vote on the resolution.

Should we go item by item then? Should we go item by item what we discussed yesterday just to clarify?

DEPUTY DIRECTOR LEE: Yes, Ms. Peace. My plan

is, again, to hear the testimony from Yvonne Hunter, League of California Cities, with regards to the DGS and the vehicle purchase requirements. And then my plan was to summarize, you know, what I understand the discussion was at the Board yesterday prior to the Board taking a vote on this item today.

BOARD MEMBER PEACE: Okay. Sounds good.

CHAIRPERSON MARIN: So then what we're going to do is -- I know that each one of the Board members has been given the draft of a statement that I think was worked out between the League of California Cities and our staff and different Board members. I know that Mr. Paparian was also involved in that. So did everybody get a copy of it? Yes. Okay.

Yvonne, would you be so kind to come in and talk to us about this compromise language?

MS. HUNTER: Good morning. Yvonne Hunter with the League of Cities.

And before we get into this item, as someone from the Third House who works with your Legislative Office, let me say how fortunate we all are, you and us, to be able to work with Caroll and her staff. She's a problem solver and delightful to work with. And so thank you very much, Caroll.

It's a good thing I did not leave the office

early yesterday to conduct some personal business, because in the span of about 15 minutes, I think I got four phone calls. And if there is anything that illustrates how this Board works cooperatively with the regulated community, this experience is it. And, frankly, if there is an example of why there should be a Board -- a public Board, this is it. So I want to thank all of you. I want to thank the Chair for asking where's the League on this, and Mr. Paparian and Mr. Washington, staff because we were I think able to work something out.

In the process, I discovered a couple of other issues that I'd like to raise that I have talked to staff about. And our computer system -- or our Internet connection was down in the office yesterday. So it was only late that I was able to access the full item and the DGS memo. So if I may, can I address a couple of other issues which I understand were also addressed yesterday. And why don't we just go in page order.

Page 5 -- I guess this is the revised page 5, sort of in the middle of the page, fifth paragraph down where it starts, "except for grandfathered grantees." The way I read this language -- and Carl Washington's staff called this to my attention, because I think Carl raised it yesterday. What this means, at least as I read it, is if an LEA -- a county LEA in this instance has received a

grant, that a city would be precluded, prevented from applying for a grant. And I don't think this is fair.

It could be that the LEA is doing a fine job. There's no problem. There's no criticism of the LEA. However, due to the geographic makeup of the county where the sites are and limited resources, the county may have to focus on the northern part of the county. And if a city has the sites that they are talking about, 50 sites, generators, end-users, haulers -- that's at the end of the paragraph -- in their area, they would be unable to apply for a grant.

I would strongly suggest that this not be included. That on a case by case basis, if they meet the eligibility requirements, they ought to be able to apply for the money. I think that's clearly important, especially in large counties where the LEA might be doing the best job they can, but they just don't have the resources to do it completely. So that's one item on that.

CHAIRPERSON MARIN: Before you go on that, Carl, you had raised this particular issue yesterday.

BOARD MEMBER WASHINGTON: Correct.

CHAIRPERSON MARIN: So would you be in agreement?

BOARD MEMBER WASHINGTON: Absolutely. That's why we contacted Yvonne. Because as I read it and got the

response from staff, I didn't think that was absolutely the case. Because I particularly mentioned large cities with smaller -- large counties with smaller cities and they have the same LEA. I think Yvonne is absolutely correct, that this would inadvertently hurt some of the smaller cities down there.

So as we go along, we'll have Mr. Lee to address that. And, again, I don't think it should be there. As Ms. Hunter just said, I think we would have a problem with the smaller cities.

CHAIRPERSON MARIN: Mr. Lee, do we have potential language that we can add here? Or what would be the best way to address this?

DEPUTY DIRECTOR LEE: Madam Chair, I'd like to address the concern the staff has with that particular proposal.

As you know, one of our charges was, again, to make sure that we were managing this program cost effectively, we were spreading out the resources to cover the identified gaps in the state.

One of the charges that was leveled last time we brought this item forward was the fact that we had -- I think in one instance I think Fresno County where we had two grantees that were potentially receiving what some people consider to be a disproportionate amount of

resources. And also we had another situation where we had one grantee that applied for a grant that only had a couple of tire facilities in their area.

We propose that the priority be given to the LEAs or Code Enforcement Authority as the ones that are best able, we feel, again, to meet the demands of this program.

And in the situation that Ms. Hunter mentioned, we would see that as a situation where if the city came to us and said that the County LEA that was managing the program was not covering their area satisfactorily, that becomes a performance issue for staff to work with the LEA on. And, again, if they aren't performing satisfactorily, to either change their grant or consider a new grantee. So we're concerned again about the proliferation of the number of small cities with potentially overlapping jurisdictions.

So, again, I think staff's preference would be that we leave the requirement as is with the preference for the county or city LEA, if there are issues that are brought to our attention that are where a particular authority is not meeting performance criteria, then we have ways to manage that through adjustment or not giving them a grant for the next time around.

CHAIRPERSON MARIN: But is there any particular language that we can add that wouldn't necessarily

preclude those agencies that would read this and say, "Well, I'm not eligible," but rather address -- you know what I'm saying? I want to somehow -- I want to have my cake and eat it, too.

DEPUTY DIRECTOR LEE: Let me ask my staff to see if there's something I might be missing on this particular point.

SUPERVISOR TURNER: Georgianne Turner, for the record.

Jim has summarized some of our concerns of why we proposed this language to begin with is to have the fewer amount of grantees covering the biggest area. But one thing that we could potentially do is to address the money issue, as I'm sitting here trying to brainstorm, is to have the cities work with the counties in some kind of cooperative or agreement as part of those moneys go to the city. I'm just kind of thinking off the top of my head right now of some possibilities.

CHAIRPERSON MARIN: Okay. All right.

Yvonne, other words of wisdom to try to resolve it?

MS. HUNTER: I think that might be a seed of an idea. You could say to replace the last sentence or modify it, agencies -- for cities that wish to apply where there already is an LEA, they are not precluded from

applying. However, they have to meet the criteria of eligibility and demonstrate or identify how they will work cooperatively with the LEA to maximize the use of the money. And, clearly, the LEA would no longer be assigned to working in their area. You don't want to have sort of double coverage.

I just think it's important in areas where the LEA is stretched too thin -- and I want to look positively at what the LEAs are doing. It may not be their fault. It simply may be there is too much activity. So I think you have a seed of an idea.

CHAIRPERSON MARIN: Okay. I know the reason why we have court reporters is that they take extremely good notes of what we just said. And if I may, I tried to cover that. And I really don't know what the best way to go forward is maybe to read back what Yvonne said. Can you do that? So that it -- is that something that the Board -- the members of the Board agree with?

BOARD MEMBER WASHINGTON: What I think we should do, Madam Chair, is allow staff if she's come up with an idea -- let Yvonne go through the rest of her concerns and let her draw the -- kind of put the language together for us with staff. And then perhaps we can go from there and go back and read the transcript and make sure they match up.

CHAIRPERSON MARIN: We're going to do that then. Item Number 1 --

BOARD MEMBER PEACE: Can I say something?

CHAIRPERSON MARIN: Yes, go ahead.

BOARD MEMBER PEACE: I understand your concerns, Yvonne. But on the other hand, the purpose of the grant is to give the LEA the resources that they need to do the job. And if they're not doing the job, then we need to find out why. I'm wondering if this would solve the problem or not. I don't know. It says, "Except for grandfathered grantees and jurisdictions that are covered by a grantee that is also an LEA, staff proposed that additional cities not be able to apply for a grant if that city is already part of the LEA's jurisdiction that is covered by a grant." So if there's a city that's not being --

MS. HUNTER: That's exactly the issue that I was raising, I think. That if you're already covered by the LEA, you could not receive the money. Perhaps there would be an opportunity for the staff -- I know you're trying to get away from competitive grants and at the same time maximize the resources. Maybe this is one instance where the staff and the Board should have some additional discretion to evaluate the performance of the LEA and the need for additional money and to try to strike some

compromise to work.

I mean, I generally have found that the Board staff is very thoughtful and reasonable and is trying to work out a good solution. Maybe this is one instance where you need to give them some discretion to say, "You're absolutely right. We will give you the extra money, but we want you to work with the LEA." Or, "Nope, sorry. The LEA is doing a good job. We're not going to give you the money," or "We'll give you a reduced amount." And that may violate your wish to move away from competitive grants. But the age old saying "one size doesn't always fit all" may apply to this instance.

DEPUTY DIRECTOR LEE: Madam Chair, if I may.

Like I said, I think Ms. Hunter is raising some good points. And I think rather than trying to craft some language on the fly, I think I'd like to have the time to work on this and bring this back before the Board next month. I would like to hear the rest of her comments to make sure we understand all of the League's positions.

But, again, I have a concern that, you know, the item we brought forth has been very carefully crafted to try and address the concerns that have been brought to us to this particular point. And I'm concerned, again, about trying to insert language that could disrupt and ultimately contravene direction we've received on this

program in the past. So I'd like to have a chance to make sure that we give it some thoughtful consideration.

CHAIRPERSON MARIN: I think we'll all agree on that then. But we would love to hear your other comments.

MS. HUNTER: The next point is on page 7 of the revised agenda item. This next one may address some of this issue that staff has. And that is Item 3, what happens if the program is oversubscribed? And I've heard third-hand, secondhand, that it's staff's thought that, if it is oversubscribed, to reduce funding in a way that focuses on those programs that will primarily address health and safety. And I think that's absolutely correct.

What I would encourage is direction so that the grant application includes that up front so that public agencies that are applying will know that they better focus on public health and safety, because if there is not enough money, that's going to be the criteria for reducing it. So I'd just put that up front so they know it. And that may address the other item.

And then getting to the issue above that, that I guess started all of this, the DGS guidelines. What I would suggest is language that I took a stab at drafting yesterday, and you'll see the handwritten word "strongly" in the second paragraph. That was Mr. Paparian's request. And if that makes him happy, then that's just dandy.

CHAIRPERSON MARIN: We'll do anything to keep him happy.

MS. HUNTER: Almost anything. Legislatively and regulatory, of course.

I think it's important to balance the absolute appropriate move in this state to alternative fuels, hybrid vehicles, energy-conserving vehicles, and all of that. And that's something that the League strongly endorses.

The problem is -- and I don't want to sound like I'm just being bureaucratic and obstinate. But the management memo is designed for state agencies. And that's highly appropriate. If the Legislature thought that it was appropriate to apply that uniformly to everybody else receiving state money, then that should be a subject for state legislation. And we can debate it and think about it and all that. That being said, the state memo does put out some pretty good guidelines on what to evaluate.

So what this two paragraph proposal is, is it on the one hand, if you're going to use this money to purchase a vehicle, you shall -- please note the word "shall" -- consider the management document memo. And I would suggest this memo be included in the grant application. And included when you do it electronically,

put a link so you find out what it is. It took me a while, partially because our computer was shut down, to find it. And Mr. Paparian's advisor was kind enough to e-mail it to me. And when I read it in its entirety, it was a little bit different than what had been described to me. So number one, they have to consider it.

And the second one is, again, to the extent feasible and practical, the grantees are strongly encouraged to meet the requirements. Doesn't say you have to, but to the extent that you can. And I think you will find that more and more public agencies are moving to electric vehicles, hybrids, et cetera. But there may be instances, for example, where they want to buy a hybrid, but there's a three- to six-months' wait, and that's why they can't do it. Or they do need an off-road vehicle, given the terrain of the community, so they buy an off-road vehicle, but one that is a little bit more energy efficient.

So we would certainly, I think, based upon my understanding of League policy and how cities work -- I don't think I'm going too far out on a limb. I think this would be fine. And I hope it would meet the concerns that the various Board members have expressed.

CHAIRPERSON MARIN: Thank you, Ms. Hunter. I really appreciate that.

And I know Ms. Peace wants to say a few things.

BOARD MEMBER PEACE: I want to thank Yvonne. I think you have worded it beautifully. And I also want to say you're exactly right that this memo should be included in the grantee package along with the website link.

MS. HUNTER: But it needs to be made clear that you're not required to follow it. The only thing you have to do is take a look at it, which by giving it to them you will be doing.

BOARD MEMBER PEACE: Make it easier for them to know what it is. Thank you very much.

CHAIRPERSON MARIN: Mr. Lee, you have a pretty good idea where we need to go; right?

DEPUTY DIRECTOR LEE: Yes, Madam Chair. We'll discuss this with Ms. Hunter further and make sure we get everything incorporated and make sure the package is brought back in a more presentable form, and hopefully approve it next month.

CHAIRPERSON MARIN: Thank you. And I really appreciate the indulgence of all of the Board members.

And I thank you, Yvonne, for your rapid response.

I know that Ms. Peace wants to continue to say something else and then Mr. Paparian.

BOARD MEMBER PEACE: So, Jim, you're going to bring the whole item back again next month?

DEPUTY DIRECTOR LEE: Yes. I'm asking the item be continued until next month.

BOARD MEMBER PEACE: And you are going to add in also -- I know we mentioned the inspection costs and how those were going to be guidelines, not real strict. You're going to address that in there also.

DEPUTY DIRECTOR LEE: That is correct.

BOARD MEMBER PEACE: And also one more thing in Committee we were talking about maintaining the grantee performance, I think I mentioned that we're going to look at all these things like are their inspection forms filled out right and are they submitted on time. And it was my concern that maybe instead of just looking at their paperwork, that we also maintain their performance by maybe having Board staff do joint inspections where necessary with the grantee to ensure that the grantees' inspectors throughout the state are enforcing the statute and regulation consistently.

And I don't remember you saying that yesterday when you gave your presentation. I think that's important. Because instead of just looking at paperwork to see if they're performing well where needed, our staff would go out and do a joint inspection to make sure they're doing what we expect them to do.

DEPUTY DIRECTOR LEE: Understand. And I think we

discussed this in the Committee meeting, Ms. Peace. And I guess my understanding would be is this would be more or less like a training and evaluation of the grantee. It would not something where our staff would be required, you know, for every inspection --

BOARD MEMBER PEACE: Just where they think it's necessary, needed, that instead of just looking at paperwork to see if they're performing, that they would actually go out and maybe follow along with an inspection with them.

DEPUTY DIRECTOR LEE: That would certainly --

BOARD MEMBER PEACE: See if they're doing it consistently and what we feel --

DEPUTY DIRECTOR LEE: We can commit to that.

BOARD MEMBER PEACE: And then, like I said, not every single time and not every single case. Just where maybe the local enforcement person thinks it's necessary.

DEPUTY DIRECTOR LEE: I understand.

CHAIRPERSON MARIN: Mr. Paparian.

BOARD MEMBER PAPARIAN: Thank you, Madam Chair.

I also wanted to add my thanks to Yvonne for stepping forward and helping craft some language on this. I think it is good language. It's consistent with Governor Schwarzenegger's very clear direction that he wants to encourage municipal and county governments to

accelerate the use of the cleanest vehicles commercially available. And I think this provides that type of encouragement.

So just a couple other things. It would be difficult for us to ask our sister agencies to step up and promote buy recycled and waste reduction efforts and other things if we didn't step up with things like this and encourage the use of clean fuel and efficient vehicles. I think it's really important to the cross-media efforts in CalEPA.

I want to mention briefly there was a mention yesterday that these vehicles aren't easily available. I double checked that last night. I've got a long list of vehicles that are available that the state's negotiated prices on. I wish I could get these prices on a car myself. But there's tons of vehicles available in every type of class that could be bought meeting this DGS requirement. So it's not an issue.

And finally -- and I promise I won't mention this again. I mentioned this in the Committee hearing the other day. But we are not the Oprah show, but we are giving away cars.

CHAIRPERSON MARIN: And Yvonne is right to take yours.

MS. HUNTER: And another thing that might be

useful is to remind your grantees that they are eligible to buy the cars through the state's purchasing program. I mean, everything that the state purchases, they're bulk purchasing. So that might --

BOARD MEMBER PAPARIAN: They have incredible deals.

MS. HUNTER: Exactly. Give them -- include the link to wherever it is to show them. I think most of them know that, but to remind them.

CHAIRPERSON MARIN: That's a good idea. Thank you, Mr. Paparian.

Okay. Well, I think that one of the things that is truly amazing is that when we bring the stakeholders that will be impacted by a policy, I think we end up with a much better policy than we began with. So I really appreciate your accommodation.

I certainly appreciate the Board's willingness to do it right, even if it takes a little bit longer.

And, Mr. Jim Lee, thank you so very much for also accommodating all of the requests.

And thank you, Yvonne.

Okay. So this will be -- it doesn't have to go to Committee anymore. It will just come back to the Board. Okay.

Next item is Item Number 16. What we're going to

do is Number 16 and 17, and then lastly we'll do Item Number 2 on the agenda.

On this particular item, everybody knows that you're welcome to speak, but we do need your -- they already have some. If anybody wants to speak, just make sure that you fill out a speaker slip, and we will gladly accommodate that.

First and foremost -- who's going to be presenting? Patty will present Item 16, please.

DEPUTY DIRECTOR WOHL: Good morning, Madam Chair, Board members. Patty Wohl with the Waste Prevention and Market Development Division.

Today's reports are the culmination of thousands of hours of work by contractors, staff, and stakeholders. Later on in this presentation, we'll be introducing the contractors, but I want to take a minute to acknowledge the staff who have been instrumental in bringing this presentation forward.

Foremost, Fernando Berton, who's front and center most of the time in regards to this project, he's the project manager and obviously our technical expert. But I think even Fernando would admit he's had some help along the way, including Steve Sorelle, who has been instrumental in the life cycle and market development piece of the study; Brian Larimore who has helped us with

the regulations; Elliot Block who's provided legal advice along the way. In addition, Kevin Taylor and Judy Friedman have both been the chief editors on this project, the sounding boards, you know, the advisors that have really made this product a better product for you.

And, of course, I would be remiss if I didn't mention Howard Levenson, who was there at the inception of this program and knew early on that the Board should start looking at getting more information on this subject.

This has been a cross-divisional as well as a cross-BDO issue. We received assistance from DPLA, in particular, Lorraine Van Kekerix. We've worked with ARB, DTSC, OEHHA. So I think we're fulfilling a lot of our efforts there as cross media.

Also to add to the accolades this morning, we need to thank Caroll Mortensen and Rick Dunne who were instrumental in shaping AB 2770 when it was going a little bit away from what the Board had originally planned.

And, lastly, of course, you, the Board. In particular, Linda Moulton-Patterson, who early on, you know, knew this was an area the Board needed more information on and wanted to get involved. And, of course, former Member Steve Jones, who was a champion of this effort.

With that, I think it's important to acknowledge

that these reports you're hearing today are truly landmark studies. And, again, California and this Board are leading the way. I think you need to commend yourselves for playing that leadership role again. Whether you are for or against this technology, I think we'd all agree that we need more information. And this is the first step. You know, we're getting more information and we'll kind of provide -- you know, help us with the decision-making process. The rest of the United States continues to look at California to chart that course. So I'm anxious to hear your input on these studies.

With that, I'll introduce Item 16 and 17, Discussion of the Evaluation of the Conversion Technology Processes and Products Report. And 17, Discussion of the Life Cycle and Market Impact Assessment of Noncombustion Waste Conversion Technologies Report and Request for Direction Regarding the Conversion Technology Report to the Legislature.

And I'll turn it over to Judy Friedman to begin the presentation.

CHAIRPERSON MARIN: Let me just understand. So are we hearing both at the same time, 16 and 17?

DEPUTY DIRECTOR WOHL: We're going to hear both, kind of our presentation, the contractor's presentation, and then we will get public comment on both. They really

do cross over.

CHAIRPERSON MARIN: I know that. I just didn't know whether it was the first one and then the other one. And it's going to be both and then we take action individually. Thank you.

Go ahead, Judy.

(Thereupon an overhead presentation was presented as follows.)

BRANCH MANAGER FRIEDMAN: Thank you. Good morning, Board members. And thank you, Patty, for the acknowledgements. And I'd also like to acknowledge you for your leadership on this as well. Really support us in these efforts.

We kind of covered this briefly, but I'll just go over again what we plan to cover today. Agenda Items 16 and 17 run together. We'll do staff and contractor presentations, then have time for Board question and answers. Then move into the public testimony. And we'd like to take the testimony for both reports -- both agenda items. And we hope that the speakers identify which report or which topic they're commenting on. Then move into discussion and direction and finally next steps.

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BRANCH MANAGER FRIEDMAN: Before we turn the presentation over to Fernando, I wanted to do a little bit

of background or historical context for conversion technology exploration. And, of course, I'm going to condense history here a little bit, just the highlights, because it's been a long time.

We've really been working on CT issues at the Board for about the last five years. We began by participating in a small forum held by the Community Environmental Council of Santa Barbara where one of the recommendations was that the state should really pursue looking at CT research and development.

This, among other things, led to our own forum held in May of 2001 where we looked at a number of issues, including barriers to CT development. We also began to hear from local governments who were interested in going beyond 50 percent, as well as from potential conversion technology developers.

Again, the Board was also tackling a new Strategic Plan, and zero waste goal was one of the predominant themes of that plan.

All of a sudden it went dead.

Anyway, during this time frame, the state experienced an energy crisis and the interest in alternative fuels and renewable energy heated up as it were. And we wanted to explore the value of materials that were still going to landfill for our use besides just

going into the ground.

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BRANCH MANAGER FRIEDMAN: And aside from everything else, it's also important to see the trends in waste generation, diversion, and disposal. This chart comes from the Agenda Item 16 report, and it's page 115 of the Processes and Products Report. And the per capita disposal amount has remained fairly constant. And that's the center line at 2200 pounds per person per year since 1995, while the estimated per capita waste generation has grown by 39 percent, and that's the top line.

The increase in estimated diversion stems from an increasing per capita waste generation estimate. That's the bottom line. And is not due to decreasing per capita disposal, which is really mostly unchanging. So, in other words, we are consuming more and diverting more, but not disposing less.

If waste generation continues its upwards trend and diversion rates remain near 50 percent, the per capita disposal amounts will begin an upward trend. This combined with the growing population will sharply increase the landfill disposal amount over the coming years. Obviously, this isn't sustainable, and we need to look at our policies and waste management policies and processes.

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BRANCH MANAGER FRIEDMAN: So all of this really led to the Board adopting a policy in April 2002 concerning conversion technologies. This policy had the general consensus support from interested parties who participated. This policy includes definitions of conversion as noncombustion using residuals that are otherwise not divertable that meet quality standards with only a minimum amount of residuals after processing.

The Board did establish a policy for diversion credit if the Board could find the following: Jurisdiction continues to implement its recycling diversion programs; facility complements the existing infrastructure and converts solid waste previously disposed; facility maintains or enhances environmental benefits; and the facility maintains, enhances economic sustainability of the Integrated Waste Management system.

Obviously, interest in maintaining or enhancing the existing infrastructure was paramount for the Board. And the Board established a level of credit of 10 percent if those criteria were met.

One important piece is that the Board also directed staff to initiate developing regulations for permitting conversion technologies that handle solid waste residual feedstock in February actually before this policy was adopted. And right now we are awaiting to start the

official clock on a set of regulations that have been developed, and we will be starting that very soon.

The Board also directed us to pursue legislation which ultimately lead to an administration proposal which lead to AB 2770.

And with that context, I'd like to turn the presentation over the Fernando who will proceed.

MR. BERTON: Good morning, Board members.

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MR. BERTON: You can hear me now. Good. I don't want to sound like a commercial either.

But I view these reports not as the culmination of a journey, but as the start of a journey. One thing that any kind of reports of this nature usually engender is you end up with more questions than you have answers. And that's why we continue researching. I think if we get too complacent and stop research, then we have problems. So I see this as the beginning of a journey.

As Judy mentioned, the Board did pass Resolution 2002-177 in April of 2002. This was the genesis for AB 2770 which at that time was an administration sponsored bill. And we did have consensus from a broad spectrum of stakeholders. The chaptered version really bore little resemblance to the earlier versions and was ultimately converted into a study bill and included a definition for

gasification. So what I want to do is go over what those two study pieces were starting with the technology evaluation.

AB 2770 did require the Board to look at these technologies, look at new and emerging technologies, and define and describe each conversion technology. In addition, we looked at the environmental -- the technical performance characteristics, the feedstocks, and the amenable feedstocks for these kind of facilities, emissions, and residues. We are also charged to identify the cleanest and least polluting technologies. And the report from -- you see researchers endeavor to do that to the best of their ability.

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MR. BERTON: The other piece of 2770 is the life cycle and market impact assessment. Again, we were charged to look to describe and evaluate the life cycle environmental and public health impacts of each conversion technology and to compare those technologies to existing solid waste management practices, and to also describe and evaluate the impacts of conversion technologies on the existing recycling and composting markets.

And you'll be hearing from Keith White of RTI International who will describe the life cycle piece and Susan Collins of Hilton Farnkopf & Hobson who will

describe the market impact piece a little bit later on in the presentation.

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MR. BERTON: In terms of the implementation of AB 2770, we did let out an RFP back in January of '03, it seems like, right? Seems so long ago. And we selected RTI as the contractor. RTI developed the solid waste decision support tool in a cooperative effort with U.S. EPA and has a wealth of experience in the world of life cycle analysis.

They also subcontracted with the National Renewable Energy Laboratory, who has been conducting quite a bit of research on gasification and fermentation technologies.

As I mentioned, Hilton Farnkopf & Hobson did the market impact piece. HFH has quite a bit of experience in the solid waste and recycling industry, so we feel very confident in their abilities.

We had an interagency agreement with UC Riverside and UC Davis for the technical evaluation. Both campuses have Ph.D. researchers focusing on thermochemical and biochemical technologies. In addition, UC Riverside does a lot of emissions testing for the South Coast AQMD. Again, we feel very confident in their abilities.

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MR. BERTON: What I'd like to do is sort of break up the rest of the presentation into two major categories. I want to talk about thermochemical processes and biochemical processes. I'll start with thermochemical processes. As you can see, thermochemical processes that we looked at were pyrolysis and gasification. And pyrolysis typically has indirect heat and is without oxygen. You can see the temperature ranges are from 750 to 1500 degrees Fahrenheit.

Gasification typically uses air or oxygen and can also use steam, hydrogen, and other kinds of substances. Gasification typically uses oxygen or air that is 25 or 30 percent of what's used in combustion. So it uses less air or oxygen than for incineration. And the temperatures start above 1300 degrees Fahrenheit.

You can see in the table some of the primary products and secondary products and residues from these technologies. The primary products from these thermochemical technologies are fuel gas that can be used to produce electricity or a synthetic gas that can be used to produce some other alternative fuel or alternative chemical.

With pyrolysis, you get pyrolytic oils that can be used for some other alternative purpose. And these products could be used to displace foreign oil as well.

So that could potentially be one of the benefits. With any process, you have a residue. So you'll have a char or ash or some kind of liquid residue from either of these, pyrolysis or gasification.

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MR. BERTON: Now, the contractor in their study did point out some differences between incineration and conversion technology. One thing I'd like to begin with is that with conversion technology, you'll always have a pre-treatment step that may or may not exist with mass burn incineration. And as I talk about this, if the contractor would like to chime in as well and provide some additional information, I would ask him to do if he feels the need.

But the differences between incineration and conversion technology, as you can see, there are a few differences. For example, the gasses coming out of the exhaust stack, you've got about 65 percent less exhaust gas coming out of the gasification or pyrolysis technology than you do from a mass burn incineration. So you're dealing with less gas in general that you're dealing with.

Additionally, the primary product for gasification and pyrolysis is a fuel or synthetic gas. So what that does is it provides an opportunity to clean up that gas, that you have an intermediate gas cleanup step

prior to being used for electricity production or alternative production. And you still have the air pollution control equipment at the end as well.

Now, the incinerators, they have no intermediate gas cleanup. What you're generating as heat, the heat boils the water. You get the steam. And it produces electricity. And you do have the air pollution control at the exhaust side of things as well. And it requires the addition of excess oxygen or air.

Anything else on that?

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MR. BERTON: The other major category is anaerobic biochemical processes. Basically broken up to anaerobic digestion and fermentation. Biochemical processes occur at lower temperatures and essentially have longer retention times because of those lower temperatures.

With anaerobic digestion, the temperatures occur anywhere between 50 and 160 degrees Fahrenheit and with no oxygen. And with anaerobic digestion, you have bacteria breaking down the feedstock.

Fermentation is also anaerobic process, and the feedstock really uses cellulosic material, biomass, or anything that has cellulose in it. And it does require a pre-treatment step called hydrolysis prior to

fermentation.

An important thing to note is that I'm referring to fermentation as the process to produce the ethynyl, which is the current term. In the past, we used acid hydrolysis or enzymatic hydrolysis. And, technically, that's incorrect, because that is that pre-treatment step prior to the actual conversion. So, you know, part of these studies is to learn. And that's one thing that we learned.

With fermentation, the way it's converted to ethynyl is you have yeast or bacteria. And there has been a lot of research on using recombinant organisms. You can see the primary product for anaerobic digestion is biogas, which can be used to produce heat or electricity. With anaerobic digestion, you also have a soil element that can be composted at the end of the day and be used for some soil building qualities. And the residue you have is lignin, which is kind of the skeleton structure for plants and materials of that sort and you do have some inorganics.

Fermentation, the primary product is ethynyl or other kinds of alcohols and other chemicals. And you do have the secondary products being carbon dioxide and animal feeds. And the residues are pretty much the same as anaerobic digestion.

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MR. BERTON: As far as feedstocks, I've mentioned feedstocks a couple of times. You can see from the chart that there's quite a bit of organic material still being landfilled today. And this would be the target material for conversion technologies. That is, materials still destined for a landfill. Those organic materials. I believe it's 30 million tons of organ materials are still being landfilled, even with 160 composting facilities and 47 percent diversion we have in California currently.

The feedstocks for these technologies would be primarily that organic fraction. The one thing is the thermochemical check processes convert all the organic material being landfilled. The biochemical technologies could only convert the biodegradable fraction of those organics.

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MR. BERTON: Now, as Judy described in the policy that was passed in 2002, Board policy requires there be up-front recycling. So there would be a requirement for some pre-treatment steps. Now, all conversion technologies do require some kind of pre-treatment step to remove the recyclables, to remove the ferrous and nonferrous metals and glass that could reduce the efficiency of high temperature systems or throw the system

off for biochemical systems. The non-biodegradable materials, as I just said, could upset the anaerobic systems. And, again, California law and Board policy require that up-front recycling.

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MR. BERTON: Now, there are a number of operating facilities, not in California and not in the U.S., but a lot of them in Japan and Europe. As can you see, there are 59 facilities total of the high temperature technologies, 20 gasification, 39 -- 20 pyrolysis, 39 gasification facilities. Most of these facilities are located in Japan. There are two pyrolysis and two gasification facilities in Germany and one gasification facility in the United Kingdom.

As you can see, the installed capacity of these 59 facilities processed two-and-a-half million tons per year of material in their processes. And these are technologies that take solid waste, the materials that we deal with here. So that two-and-a-half-million tons would be approximately 8 percent of our total organic material landfilled in California. In looking at the charts and the study, the average size gasification facility was about 240 tons per day. And the average size pyrolysis facility was 150 tons per day.

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MR. BERTON: Now, the study also points out that there were some problems with these facilities. In Germany, there was a pyrolysis facility that there was an accident due to a plug of waste. You had pyrolytic gasses that escaped, and the plant personnel were hospitalized. It was determined that the reason for the accident was poor feedstock preparation and accepting large items like mattresses.

So this was a learning experience, and there are some Japanese companies that are using these processes very successfully. So they learned from those mistakes and moved forward on that.

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MR. BERTON: In addition, there was a gasification facility in Australia that was doing a lot of research. They were doing a lot of research on their char gasification. At the end, there's always a residue that is char. What they were going to do is get some additional heat value from that char so that they could reduce that amount of char that would still be going to a landfill. Well, they spent a lot of money on that, and it really didn't go anywhere. So they ran into some financial problems. And the parent company ceased to fund that facility. From my understanding, the facility itself, the first stage gasification was working just

fine. It was just the secondary component of the char gasification that was the issue.

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MR. BERTON: Now, there are a number of biochemical facilities that are operating as well. Predominantly, in Europe you have anaerobic digestion. In 2000, you had 1.1 million tons per year that was being run through these kinds of facilities, again taking combinations of mixed waste, green waste, animal bedding, food waste, et cetera. In 2004, there was 2.8 million tons being processed. There was a 250 percent increase. And Rob Williams, one of the UC researchers, actually visited a couple of these facilities over the summer.

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MR. BERTON: This just shows pictorially the growth curve of anaerobic digestion in Europe. Anaerobic digestion seems to be pretty popular in California, too. There are at least five projects proposed in California. And I'll get into a little bit more details on those a little bit later.

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MR. BERTON: Now, after this slide, I'll be turning it over to Rob Williams. But I want to preface things that all conversion technologies will require environmental controls. However, you know, with MSW

combustion, the emissions have improved. And some of those same technologies used for MSW combustion could likely be used for thermochemical technologies and biochemical technologies. And so that's why conversion technologies can offer improvements relative to those combustion systems.

So with that, I'd like to introduce Rob Williams with the University of California Davis, one of the contractors doing this. And he will be discussing further some of those environmental impacts, some of the conclusions from the report, and recommendations for further studies. So I'll pass the mouse over to him.

CHAIRPERSON MARIN: Welcome.

MR. WILLIAMS: Thank you. Good morning.

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MR. WILLIAMS: So I'll start off and make a few comments about some of the environmental impacts of some of the systems that we reviewed in our report.

I want to start off with this chart that shows fairly significant emission reductions due just to the combustion of municipal solid waste in this country. The 1990 emissions for the total industry, those are a summation of all large MSW combustion systems in the country, all of their emissions add together. And then between 1990 and year 2000, they had to apply maximum

allowable control technology to reduce -- mostly to address the dioxin and furan emission problem.

So the final column shows the emission reduction after installation of much better pollution control equipment. And the point is that dioxin total toxic equivalent quantity decreased by over 99 percent. I believe in 1990 the solid waste combustion industry accounted for 40 to 45 percent of the total US dioxin emitted to the air, and by the year 2000 with their reduction to industry-wide only 12 grams TEQ per year. They were down to less than 1 percent of the US total air emission burden. At the same time, total air emissions in the US decreased by over 90 percent for all sources between 1990 and 2000.

The point is that existing modern commercial combustion systems are doing very well, and we would expect these thermochemical conversion systems that we reviewed to have possibly improved emissions characteristics compared to modern combustion.

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MR. WILLIAMS: This is a table right out of the report. It's a list of several of the thermochemical facilities that are operating or recently were operating. These are gasification and/or pyrolysis facilities making producer or synthesis gas and burning it for heat and

power in a close coupled situation to the gasifier reactor.

The top two rows are emission limits given by U.S. EPA and also German emission limits which are typical of most of the European community. And then I'm trying to highlight the red numbers in each column represent -- were the highest values in each column to show that if they are red, they're right up against the limit on some of those U.S. or German values. But the point also is that even those limits that are -- the emissions that are near red right now, if they were to be installed in California, they would have to meet existing current air requirements. And there are technologies to address some of those higher emissions that you see, including improved performance of the reactor or a better sorting of the feedstock to remove some of the heavy metals, for instance.

And then another point is that these reported emissions list some dioxin values. And in all cases for these facilities, their dioxin levels were much less than the European standard of 0.1 nanograms per normal cubic meter of TEQ. Some of the problems with these numbers, though, is that they are self-reported by manufacturers or the facility operators. And we weren't able to get in all cases good verifiable third-party data. One of the recommendations is to go in later and attempt to do this.

Also, other use of these gasses if it's not used directly for heat and power, if they were used as a synthesis gas for chemicals and liquid fuels, you'd expect them to have even lower emissions.

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MR. WILLIAMS: Thermochemical systems have liquid and solid residues. There are liquids and condensates that could be created which will require treatment before disposal. And most of these are standard industrial wastewater and liquid treatment that can clean them up or maintain the material on site while it evaporates. And then you end up with concentrated sludge, for instance.

Scrubber solutions from some air pollution control devices also will be a liquid affluent which can easily be cleaned up before disposal. There are solid residues from all these processes. All the inorganic material will not react. And the amount of that solid is very dependant of the process and feedstock used. And depending on the toxicity level of the solids, there could be commercial uses, otherwise landfill or other disposal.

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MR. WILLIAMS: Uses of products from biochemical processing for the anaerobic digestion systems that create the biogass, their primary use will be for heat or power in boiler furnaces or reciprocating engines. There are

several -- or there are many operating landfill gas to energy facilities in California, which is essentially the same fuel gas used in these facilities or created at a landfill as would be created in an anaerobic digester outside of the landfill. These facilities are running, and they are meeting these emissions.

This chart shows Air Resources Board best available control technology levels for waste gas or biogass, they call it, engines or boilers. So these facilities are running and operating meeting these limits. And an anaerobic digester that creates biogas would operate pretty much the same way. There is a point to be brought up that the EPA has measured dioxin emissions from landfill gas flares or engines up to levels that are the limit of the European standard. It's not in all cases, but it's also a possibility.

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MR. WILLIAMS: The fermentation biochemical process mainly -- we're probably going to be looking at ethynyl production. And there's small fugitive emissions from all these facilities, but they would all have to be met and controlled by -- controlled by general plant maintenance and good operation procedures. But the main product from fermentation or ethynyl producing process would be a fuel gas that would be used as gasoline oxygen.

And the emissions would be meeting the same as the ethynyl from any other source.

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MR. WILLIAMS: And there are liquid effluents from these biochemical processes, anaerobic digesters. Some of them have excess water, and it can be used as a fertilizer in land application instances. If it's close enough to a field and the economics are such, there are chances for heavy metal contamination in some of these liquids, and that all depends on how the feedstock has been sorted and how -- it's feedstock dependant, basically.

The fermentation processes that might use acid hydrolysis as a pre-treatment will have some effluent that will have to be neutralized. And the pH would have to be neutralized before treatment or disposal.

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MR. WILLIAMS: Solid residues from biochemical processes are feedstock dependant, of course. And they are a fairly large amount compared to the thermochemical conversion process because the plastics and some of the biomass does not biodegrade. Depending on the amount of up-front sorting for these processes, there could be another opportunity for more recovery of glass, metals, plastics, and organics on the back end if it hasn't been

removed before the process.

There's undigested and unfermented biomass solids that can be composted as long as it meets toxicity levels, and can be used as a thermochemical feedstock if it's collocated next to a thermochemical processor or would probably have to be landfilled.

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MR. WILLIAMS: So I'll go into some of the findings, the major findings that are in the report.

Essentially, these systems, thermochemical and biochemical systems, converting MSW components are operating in other places, mostly Europe and Japan. And these reasons are mainly market and policy driven.

In Europe, there's a large public health initiative to reduce affects of landfill -- long-term affects of landfill on the public. They also have greenhouse gas reduction goals. So can you see that EU landfill directive requires that biodegradable waste should be less than 35 percent of the amount it was in 1995 by the year 2015. So that requires solid waste handlers to do something with the waste material before it can go to the landfill. And it's called -- it has to be treated, and that's part of the reason for the growth of the AD facilities' capacity in Europe and some of the thermochemical facilities.

They also had high renewable electricity prices paid to the producers. There's carbon trading market which adds finances to the bottom line. And they also are up against high tipping fees because of landfill restrictions -- landfill availability.

Japan is also working with greenhouse gas reduction goals, and they have a very limited landfill capacity and also fairly limited domestic energy resources.

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MR. WILLIAMS: So thermochemical systems compared to biochemical systems, they operate higher temperatures and faster reaction rates. This allows for larger capacity facilities and/or smaller footprint. In general, they're best suited for drier feedstocks. They can accept nearly all biomass and plastics. However, sorting is almost always preferred -- some degree of sorting is preferred for all these systems. Thermochemical systems have a wider range of possible output products and usually yield less solid residue.

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MR. WILLIAMS: Biochemical systems, on the other hand, compared to thermochemical systems, they operate at lower temperatures, slower reaction rates, which means for a large capacity facility, it requires a large volume

reactor, large tank, which can be expensive. Biochemical processes are best suited for higher moisture feedstocks. They cannot degrade the plastics and a portion of the biomass, the lignin portion. Sorting of feedstock is highly desirable for these processes. And they yield more solid residue which can be composted or dried, if there's a collocated thermochemical facility.

The fact that it looks like these biochemical systems will be excluded from the transformation category and allow full diversion credit provides significant economic incentive of these systems over conversion technologies, which seems to be pointing some of the existing searches -- local California jurisdictions that are searching for alternatives are leaning towards AD mainly in large part because of this reason, the diversion credit.

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MR. WILLIAMS: This graph shows the major waste components that make up the current landfill stream in California shown as a fraction of total weight and also as a fraction of the total energy in the material. The light bar is by weight, and the dark bar is the energy component.

The point is that paper and the two film and non-film plastic categories, by weight they add up to

maybe 40 percent of the total disposed material in the state. But their energy value, if you add up the energy bar, it's close to 70 percent of the total energy. So that will lead, especially the thermochemical facilities, to sort positively for paper in the plastics.

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MR. WILLIAMS: So that would lead us to believe that there'll be enhanced recycling opportunities because of this better source separation or enhanced sorting of any of the feedstock materials for conversion facilities.

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MR. WILLIAMS: So the recommendations in the report include probably the -- maybe the important one we think right now is the definition of gasification that's in statute listed by AB 2770 should be revised to provide correct scientific definition, if we decide or if it's reasonable to actually keep technology definitions in the statute. If we decide to keep defining technologies in law, then the improved definitions are listed in the report that should be more realistic.

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MR. WILLIAMS: Another recommendation is that the state should continue to investigate CTs, conversion technologies, in much more detail. We really need complete emission data from existing facilities,

third-party verifiable believable data. It would be good for any developer and for the state to know better specific details on the commercial status of these facilities. And we could look at local tipping fees and unit cost and operating and electricity prices and the whole economic picture. And in any of these decisions, I think it should be that we should assess social and economic costs of all waste management alternatives, including the do-nothing landfill alternative.

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MR. WILLIAMS: We believe the state should be involved in sponsoring pilot scale demonstration facilities which would include a number of different technologies. We would want to see a Committee of stakeholders involved in all the selection and operation decisions. This would allow for detailed analysis of all the systems and open public dissemination of all the results. And the goal, of course, is to develop credible and verifiable information.

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MR. WILLIAMS: We also think it's worthwhile to explore the ecopark concept, which is basically a big industrial facility that takes the material that we call MSW now and treats it as an industrial process input. And it would include enhanced sorting and better recycling.

There would probably be thermochemical and biochemical conversion processes on the site. And, eventually, the output would be a very small amount of solid residue that would have to be landfilled.

And it's also worthwhile to investigate biorefinery concepts which would allow perhaps other biomass sources outside of MSW to be sited or to be used as a co-feedstock with MSW biomass to enhance commercialization. U.S. Department of Energy is involved in biorefinery investigations for ethynyl in biodiesel, for instance.

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MR. WILLIAMS: And we would like to see the improvement of the characterization of MSW in order to be able to predict behavior of these systems using MSW feedstocks. And these are basic physical and chemical property type information that's not always available in the literature.

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MR. WILLIAMS: And then, finally, to encourage CT development and to reduce landfilling, then we need to explore better financing mechanisms and perhaps policy mechanisms. And then an example of what is likely to happen is there would be collocation of these facilities with existing waste treatment.

Thank you.

CHAIRPERSON MARIN: Okay. Before you go on, can someone take a look at who does what up there? Is there any way that we can call an engineer in? This is very disturbing.

EXECUTIVE DIRECTOR LEARY: I know it is, Madam Chair. We've been struggling with this thing for a while. I'll see what the latest status is.

CHAIRPERSON MARIN: Thank you.

EXECUTIVE DIRECTOR LEARY: Thank you.

MR. BERTON: It's back to me.

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MR. BERTON: What I wanted to do real quickly is discuss some other reports that were done around the world.

In August of 1998, the Center for Analysis and Dissemination of Demonstrated Energy Technologies conducted a study released in August of '98. The CADDET Program was established in '98 with an agreement with the International Energy Agency to promote international exchange of information on energy efficient technologies. The program is currently sponsored by ten countries throughout the world including Japan, Australia, the U.S., Belgium, Denmark, and some European countries.

What they conclude -- some of the major

conclusions in some of their reports was advanced thermal conversion technologies. They were looking specifically at gasification and pyrolysis. They opined that these thermal conversion technologies would meet current emission standards and could actually meet tighter limits.

They also concluded that these thermochemical technologies would have lower emissions than mass burn technologies because of waste sorting for the more desired homogeneous feedstock. You have that lower gas flow that I pointed out earlier, differences between incineration and conversion. And you'd have improved producer gas combustion.

The report also did point out that prior to 1990 -- the facilities of this sort did use unsorted MSW, but a lot them were abandoned due to technical problems. And what this proved was that conversion technologies do desire a homogeneous feedstock, which leads to, again, the presorting and size reduction, which is imperative to remove the recyclables and something you would require in California.

They also stated that the presence of recycling programs may improve the economics, because what it does is it reduces those pre-treatment requirements on the front end of these conversion technologies. It's being done at the municipal level already.

Some of the potential benefits for these thermal conversion technologies, lower environmental impacts. This is all compared to mass burn incineration: Lower environmental impacts, higher conversion efficiencies, and greater compatibility with recycling.

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MR. BERTON: There was another report done -- it was a report entitled "Report of the Alternative Waste Management Technologies and Practices Inquiry." And this was released in April of 2000. This report was prepared by the Practices Inquiry for the state government of New South Wales in Australia. What they stated is that no one technology is suitable for all waste streams. And I think we would be in agreement there is no one panacea. So they also think these technologies could form part of an integrated waste management system.

What New South Wales was doing at the time in April of 2000 was looking into what an integrated waste management system would look like for that particular state or province in Australia. And they think that conversion technologies, as we define, would be part of that integrated waste management system. They also think that pyrolysis and gasification could operate at a smaller or modular scale. And, finally, fermentation would have limited air and water emissions.

With that, we will transition -- that's the end of my stuff for now. We will transition into the life cycle. But I'm not sure if the Board would like to take a break at this point or not. It's the pleasure of the Board. Would you like us to continue or take a break or --

CHAIRPERSON MARIN: Well, let's see. I know somebody needs a break really bad. And I'm not looking at Mr. Paparian. We will take a break. This would be a good time.

And I understand that the reason why we have this noise coming from above, that it's because many of you have your cell phones on. So if you all turn off your cell phones, that this will disappear. Maybe when we come back, we'll do that for a few minutes and see if, in fact, that is the case. Anyways, we will be back in 15 minutes.

(Thereupon, a recess was taken.)

CHAIRPERSON MARIN: We do have a full Board, just for record. I know at least one Board member has to leave by 12:30, so it would be my pleasure to finish by 12:30. But I don't know. Somehow I believe that might not necessarily be the case. I'm going to ask staff to do as much as we can. Certainly, we want to hear as much as you want to say. But we also have quite a few speakers. And it is possible some of the people that came from out of

town also have to catch a plane. So we want to do this as fairly as possible and as fast as possible to get as much information as we need. Otherwise, since Carl Washington missed some of the information, we're going to have to revisit the entire presentation.

BOARD MEMBER WASHINGTON: Madam Chair, I heard everything that Fernando said upstairs in my office. I was listening in on him. And I do have my questions for him at the conclusion. So if you need to take all day, I'm not the one who needs to leave at 12:30. So you're welcome to do so.

CHAIRPERSON MARIN: He's so quick witted. What can we say.

Fernando, go ahead.

MR. BERTON: I'll do a brief introduction.

CHAIRPERSON MARIN: I'm sorry. There might be some ex partes that need to be reported.

Moulton-Patterson. No.

BOARD MEMBER PEACE: I would like to say I spoke briefly to James Stuart from BRI Energy.

CHAIRPERSON MARIN: Thank you.

Ms. Mulé.

BOARD MEMBER MULÉ: Up to date.

CHAIRPERSON MARIN: Mr. Paparian.

BOARD MEMBER PAPARIAN: I spoke with bill

McGavern, Jane Williams, and Scott Smithline about the conversion technology item.

BOARD MEMBER WASHINGTON: Up to date.

CHAIRPERSON MARIN: So am I.

Thank you.

MR. BERTON: Okay. As I stated earlier, the life cycle was to look at -- just compare the life cycle of conversion technologies to solid waste management systems. This was all based on hypothetical scenarios in the San Francisco, Bay Area, and the L.A. basin, and there were growth scenarios that were established as well.

So with that very brief introduction, I'll turn it over to Keith White with RTI International who will take you through the bulk.

(Thereupon an overhead presentation was presented as follows.)

MR. WHITE: Thank you, and it's a pleasure to be here this morning.

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MR. WHITE: Life cycle assessment, to give you a brief background on what exactly life cycle assessment is, it's a cradle to the grave system type analysis where we don't look at one particular facility or process in a vacuum, but rather the whole chain of processes that make

up that system. In this case, we're talking about waste management system. So we don't look at a landfill alone as a specific process, but we look at the whole chain of events, including waste collection and any sort of transportation or processing and through its final disposition.

So in that context we're looking at a number of things. One, we're looking upstream and downstream, which is the life cycle. We're looking at multi-media, multi-pollutant type burdens. So we don't just look at one specific pollutant or media. We're looking at air, water, solid waste. We're looking at multiple pollutants within each of those categories.

International Standards Organization has fairly recently prepared some guidelines on conducting an LCA. And these guidelines are international standards. They are guidelines, which means that they're not standards at this point for everything. They're draft in some cases.

An LCA typically includes three main components, which is an inventory analysis. An inventory analysis is basically characterizing and quantifying inputs and outputs on a pollutant basis or energy basis. So an inventory might capture things like pounds of sulfur dioxin emissions over the whole life cycle chain.

An impact assessment is typically the second

stage. That's usually converting your inventory items into some other metric that describes an impact category. In the case of sulfur dioxin emissions and other acid gasses, we might have an acidification potential. In case of climate change gasses, we might use a global warming potential.

And the final phase of an LCA is an interpretation, which is basically taking the results of your inventory and/or impact assessment and making some conclusions based on that.

For the study, the main focus was on the inventory analysis piece of identifying and characterizing the specific inputs and outputs, not only for the conversion technologies, but for the entire integrated waste management systems and also looking at future scenarios.

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MR. WHITE: So our overall approach was first we had to define the technologies that we were looking at. The three specific technologies that the Board requested us to look at were acid hydrolysis, gasification, and catalytic cracking. Catalytic cracking is for plastics only. We based our process definitions on three technologies that represented the most near-term commercial viable processes that we could find. They were

Masada, Bright Star Environmental, and Plastics Energy, LLC, for catalytic cracking.

Getting back to the gasification and Bright Star Environmental, there's a number of different technologies in each of these categories. Gasification, we tried to follow the state's definition of gasification as closely as possible. There are very few technologies that meet that strict definition, and there is some discussion about updating or modifying that definition. Bright Star Environmental was one technology that came fairly close to meeting that definition.

So after we defined each of these technologies, what the processes include, we developed the material and energy balances, which is essentially what are the inputs and outputs that are required for each of these processes. From there, we built the entire life cycle models, which is adding all the other pieces of the waste management strategy. And from there, we analyze alternative scenarios that were pre-defined by the Board in the RFP. I'll describe what each of those scenarios are in a few minutes.

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MR. WHITE: Defining the conversion technologies, as I said, are basically defining what are all the steps in the process. The way we defined these technologies was

largely through communication with the technology vendors. We were able to get patent information, other public information that describes the processes and technologies. We had a number of telephone conferences with the technology vendors to ask specific questions about, well, how does this work and where does this material go, to get a better handle on how their technologies operate and what exactly their steps are. So from that, we were able to develop pretty good technology definitions.

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MR. WHITE: We worked with the National Renewable Energy Lab who helped us do the material and energy balances for each of the technologies we looked at. And, again, the material and energy balance is largely a characterization of what are the inputs and outputs to the process. So we have some preprocessed feedstock waste material going into the technology. The technology itself uses some level of energy and materials as inputs. And it produces products. It produces energy. It produces emissions.

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MR. WHITE: The National Renewable Energy Lab uses a commercial software package to do the mass and energy balance. And that package is called ASPEN Plus. As I said, we used a lot of publicly available information

to work out all the details of that material and energy balance. So we needed to know what type of air pollution control equipment would be used on a gasification type process.

We worked through the state and communicated with the Air Resources Board and other contacts there to try to figure out what exactly would be required in terms of air pollution controls, et cetera. Most of that is dependant on specific locations and where it's going to be located, what air shed that's going to be in. So we had to come up with some pretty conservative assumptions in terms of what types of air pollution control and other systems would be put in place on the technologies.

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MR. WHITE: The life cycle inventory. Basically, when we did the life cycle inventory, we started with the material and energy balance as prepared by the National Renewable Energy Lab. At RTI, we've worked with EPA for the past ten years to develop a solid waste management tool that is a life cycle tool to capture the environmental and cost impacts of different solid waste management alternatives. So starting with that material and energy balance we used our model to characterize the other steps in the integrated waste management system which may include collection and transfer station

materials.

CHAIRPERSON MARIN: Let me just -- if anybody has their cell phone on, if you please turn it off just until 12:30. We're going to see if, in fact, that is a problem. So I'm going to ask everyone that has a cell phone on to turn it off. Because if it doesn't, I'm going to ask somebody else to take a look at this. Thank you. Go ahead.

MR. WHITE: Thank you.

So we used our model to model the other steps in the system, the collection transfer station, materials recovery facilities, the composting, waste combustion landfill. And we filled any data gaps that we had with a commercial software called DEAM/TEAM from a company called Eco Balance. So we just had a few data gaps that were related to chemical input on technologies.

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MR. WHITE: This gives you a visual of sort of the step up between the material and energy balance to the whole life cycle picture. The material and energy balance basically would capture what goes in and out of the boxes defined on the screen. The whole life cycle is adding those additional pieces. We're not only adding those additional pieces, but we're also expanding it to include what are the burdens associated with the energy produced

or the material inputs that are produced for each of these steps.

One important aspect of the life cycle is also that we capture any benefits associated with energy or materials recovery. So in any step, for example, if we have some material separation and recycling, we account for the benefit associated with the offset of virgin material production. Similarly for energy, if we're producing electrical energy, for example, we take an offset for the displacement or avoided electrical energy production that might be achieved.

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MR. WHITE: The scenarios we analyzed as part of the project, we had three landfill scenarios. And we took -- the landfill scenarios basically differ on how the gas is managed. We had a landfill with gas venting scenario, which would be a worst case scenario landfill with gas collection in flaring which would be an average case. And landfill with gas collection and utilization for energy recovery, which would represent the best case scenario.

We had a waste to energy scenario; a composting scenario, which was organic only composting, not mixed waste composting. The inorganic fraction was still landfilled in that scenario.

And our three recycling scenarios. And our recycling scenarios differed in the level of separation efficiency. And by separation efficiency, what we mean is if we have a certain quantity of a recyclable material, say, 100 tons of aluminum going into a recycling facility, that has to get processed by the equipment or by pickers or however they're doing that. Thirty-five percent efficiency means that 35 percent of the total mass of aluminum going in will get pulled out for recycling. An efficiency of 75 percent means that 75 percent of the mass of aluminum going in will get recovered for recycling. It's a level of efficiency on the recycling process. And we looked at three cases to get an idea of what sort of range that might be.

And then we had a conversion technology scenario, which Fernando touched on a little bit.

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MR. WHITE: That hypothetical scenario contained the three technologies: The acid hydrolysis, gasification, and catalytic cracking. And I'll describe how we model those three based on this definition of the scenario. And this definition came right from the RFP that the Board had developed.

In 2003, which was our base year, they had three 500-ton-per-day acid hydrolysis facilities, four

500-ton-per-day gasification facilities, and one 50-ton-per-day catalytic cracking facility.

In the years 2004 to 2010, what we did is added an additional 500-ton-per-day gasification plant in the year 2005 and 2007. We added two additional 500-ton-per-day acid hydrolysis plants. In the year 2010 we added one additional 50-ton-per-day gasification plant. So this gave us our quantities of waste that would be going to or being processed by these technologies. Since these technologies --

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MR. WHITE: -- only use certain materials in the waste stream, there's actually more waste going to the technology than these capacities because they have to pull out the stuff they don't want. For example, a gasification plant is going to pull out all the metals and glass they can because it follows their process.

So we use this total amount going to each facility as a way to develop a quantity of waste managed. And we use that quantity of waste managed for all scenarios. They're all being compared on an apples to apples basis. So if I have one million tons of waste that are going through our conversion technology scenarios based on those capacities, then I'm looking at that same one million tons of waste going to the landfill scenarios

or to the compost scenarios or to the combustion or recycling scenarios.

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MR. WHITE: Getting into the findings. And what I'm going to present for the findings here, we had the same general trends for each region of San Francisco and Los Angeles largely because the waste composition between those two regions was fairly similar. So there wasn't a whole lot of differentiation between the two regions on that level.

And I'm going to present for the year 2010 only. We looked at, you know, 2003, 2005, 2007, 2010. They all had the same sort of trends. It just depends on what level of technology we're implementing.

Finding Number 1, the amount of energy produced by the conversion technology scenario is large and creates significant environmental benefits. This is what the conversion technologies are intended to do, take garbage and turn it into useful energy and product. As we look at it across the board --

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MR. WHITE: -- it has some significant benefits in terms of energy. What you're seeing here, anything above zero is a net energy consumer. Anything below zero is a net energy avoider. That means their net energy

produced is greater than their net energy consumed.

For the conversion technologies, an interesting point is not all of that bar comes from energy production. About 10 to 25 percent comes from the additional recycling that is achieved by the conversion technologies. For example, they're pulling out some level of glass, metals, other material. The recycling of that also displaces energy that would be used to produce those same materials from virgin sources.

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MR. WHITE: Finding Number 2, for criteria pollutants, the conversion technologies are also at the same level or better than the alternative waste management scenarios.

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MR. WHITE: If we go to that chart, we'll see, again, that we have a net avoidance of criteria pollutants on a life cycle basis. And that, again, is largely due to the displacement of electrical energy, fuels, and materials production.

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MR. WHITE: If we look at sulfur dioxin emissions, we see the same sort of patterns. Sulfur dioxin can largely be related to energy production and electrical energy production. So any type of process

where we're recovering energy is going to have a fairly significant sulfur dioxide or sulfur oxide offset. So you see the processes that recover energy, the landfill with gas collection and energy recovery, the waste energy, and also the recycling processes that are offsetting some energy production by displacing virgin materials production and the conversion technologies.

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MR. WHITE: From a climate change perspective, the conversion technology is generally better or the same level as some of the alternatives.

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MR. WHITE: As we look at this case, we look at the landfill with the gas venting scenario is probably our worst case scenario. If we controlled the gas at the landfill, that greatly reduces the carbon emissions. But the most beneficial way to do that would be to take that gas and do something with it or take the material and do something with it. And that would come through the waste energy, the composting, conversion technology scenarios.

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MR. WHITE: Some additional findings that we have from our work. Insufficient data were available to assess the potential for the conversion technology scenarios to produce emissions of dioxin furans and other hazardous or

toxic pollutants. Brian touched on this a little bit earlier. There is piecemeal data available on these technologies. And depending on who you talk to and what day of the week or month you talk to them, you may get a different story. And it's also very contingent on what sort of material they're processing through the technology. Waste is highly variable. You never know what you're going to get. It's going to be largely dependant on what's in that waste and how well they're able to pre-process or remove those materials that they don't want.

Number 5, the environmental benefits of the conversion technology are highly dependant on their ability to have high conversion efficiencies and materials recycling. A lot of the benefit from these technologies comes from taking the waste and producing the fuel or chemical product so their ability to do that in the most efficient manner possible is desirable.

In addition, material recycling rates -- we assumed a fairly conservative rate of about 50 percent recycling. So if we have mixed waste going to a facility, we assumed about half of the material that they're pulling out and sending to recycling and about the other half of that is going to a landfill. About 5 percent is a process contaminant. So their ability to have higher rates of

recycling than that would make their profiles look better.

Number 6, conversion technologies would decrease the amount of waste disposed of in landfills. This is also what they're designed to do. They would basically be reducing the organic fraction greatly and also result in additional recycling.

Number 7, and this has been touched on earlier as well. These technologies don't exist in California. They don't exist in the U.S. for municipal solid waste. Therefore, there is a high level of uncertainty associated with their environmental performance as compared to some of the existing waste management practices that we looked at.

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MR. WHITE: Some additional uncertainties and limitations. We didn't focus on optimal siting collocation aspects. That wasn't part of our scope. We had specific regions we looked at, the Los Angeles and San Francisco regions. And we used specific waste characterization data for each of those regions from the Board's database. But we didn't look at any specific siting aspects, other than the RFP required us to look at those collocated with MRFs.

Uncertainty in how the feedstocks will be delivered to the conversion technologies. We basically

assumed there would be some feedstock going to the up-front MRF for the conversion technologies and some pre-processing. There's a number of ways the material can get to the facility. You could have private contracts to bring source separated or segregated material to the facilities. For this project, we basically assumed that it would be mixed waste going through the normal collection system to a front-end MRF.

The only case was in the case of catalytic cracking, because they're only taking plastics. We assumed that half of that waste stream would come from commercial or industrial sector as a source separated material. And we assume the other half would be pulled, positively sorted out of a mixed waste MRF.

We considered municipal solid waste only. We didn't look at other types of potential waste, industrial, agricultural, et cetera. Most of the processes we use national averages. We did tailor it to California in terms of energy production and other variables to the extent we could. A lot of these processes and conversion technologies we had to use our best available data, which is largely average data.

And, finally, LCA is not a risk assessment. We don't have spacial differentiation. Meaning, we don't know exactly where the facilities are going to be located.

We don't know -- an LCA is not designed to calculate the rate of release of different chemicals or different concentration. We do have some information in the materials and energy balances that the National Renewable Energy Lab developed. So that may be useful for doing a risk assessment in the future. But LCA is not designed to look at that. We're looking at net total life cycle emissions, and I'll leave that at that.

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MR. WHITE: Future research needs. Again, we need to look at updating the results or readdressing this whole area with actual facility data sometime in the future, preferably operating the U.S. under U.S. regulations or even California regulations.

Analyze regions with wider variation in waste composition. As I mentioned earlier, the San Francisco and Los Angeles regions had fairly similar waste composition. So there wasn't enough variations in those compositions to see if, for example, you had low organics or high organics in your waste stream, what impact that might be on comparing the conversion technology scenario to the other waste management alternatives.

Brian, again, mentioned that looking at ecopark or collocating options may be a good idea for the future, taking advantage of the relationships that can be

established between different types of facilities, and also looking at smaller modular conversion technology facilities that can be easily set up in specific locations to maximize that location aspect.

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MR. WHITE: And with that, I thank you. And I'll turn the presentation over to Susan Collins from HFH, who will present the market impact assessment.

CHAIRPERSON MARIN: Welcome, Susan.

MS. COLLINS: Thank you.

This is the last of the technical presentations, so the end is near. We're about 20 slides away from the end of the technical presentations.

(Thereupon an overhead presentation was presented as follows.)

MS. COLLINS: Our piece of it was the market impact assessment. So looking at how conversion technologies -- is it not on? Okay. Looking at how conversion technologies might impact the existing marketplace. So our study objectives, there were two parts. The economic and financial objectives were to look at the affects on recycling and composting industries due to increases or decreases in the feedstock supply. And that could occur -- there could be a tonnage effect or a price effect. In either case, we would estimate the

economic gains or losses to the recycling and composting industries.

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MS. COLLINS: The other part of it was to look at institutional relationships, affects on hauler contractual relationships, municipal contractual relationships. Look at the affects on the regional recycling and composting infrastructure and the affects of put or pay contracts on recycling and composting businesses. So that pretty well sums up what we were trying to do with this study.

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MS. COLLINS: Our overall approach was to develop the key modeling assumptions and put together a financial model to perform the calculations. Into that financial model, we first set up the existing conditions. We developed baseline projections for recycling and composting. What's going to happen in the absence of conversion technology, sort of model the marketplace as it is now and as it is in the future up to the year 2010, and then impose upon that model estimating the impacts of conversion technologies on recycling and composting. Impose another set of conditions on that model and see what happens.

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MS. COLLINS: I've got three slides here on data

gathering, so it fit three different categories. The first one being quantities and prices. We started by looking at the waste composition in the two regions, San Francisco and Los Angeles, using the CIWMB database. We looked at the quantities of paper, plastic, organics, recycled, both in-state and exports, and the pricing of those recyclables and organics, also the pricing of landfill fees because that's part of the marketplace as well. We looked at new diversion programs that are already planned that are anticipated to take place between now and 2010. And we used two studies that have already been completed for the Board back in 2001 that estimated the jobs and revenues per ton for targeted materials. You know, if you have a ton of recycled newspaper, how many jobs does that create? What kind of revenues does it create?

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MS. COLLINS: The next phase of data gathering was CT feedstock. And we looked at this from several different angles. What do the facility proponents want as feedstock? So we asked them. We also asked -- or looked into jurisdictions that are interested in CT and said, "What material do you want to send to CT facilities?" And sometimes the answers from number one and number two were different.

We also looked at the composition of the waste stream, because sometimes that was different still. And we looked at pricing, again, by surveying the facility proponents and the jurisdictions to see what kind of pricing the facilities wanted and what kind of pricing the jurisdictions were willing to pay.

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MS. COLLINS: The last bit of data gathering was on institutional arrangements, looking at the relationships that are already in place, municipal contracts with haulers, haulers' contracts with facilities, recycling facility contracts. They contract with both haulers and municipalities, and existing MRF and landfill throughput and capacity. A lot of times there's a lot of capacity out there, but not much throughput and vice versa, and then you have shortages.

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MS. COLLINS: So this slide was put together so that if I had to answer the basic questions that were posed to us for the study, all at once, these are the market findings in a nutshell.

Recycling: There would be a positive impact on recycling due to the pre-processing that Keith and Fernando have already talked about.

On composting and mulching markets, there would

be basically a neutral impact.

And on landfills, there would be a negative impact. What I mean by that is that landfills would lose business as a result of conversion technologies. But, of course, that's a very brief statement, and there are details, reasons, and other possibilities that follow in the coming slides.

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MS. COLLINS: We've talked about this basket of facilities already, acid hydrolysis, gasification, catalytic cracking. This is what we put together for each of the two regions. It was in the RFP, and we followed that. Just to give you an overall, what it would amount to is about 1.2 million tons of waste in 2003 in each of the two regions. And as the facilities increased, there would be about 1.8 million tons in each of the two regions in 2010. That has a very different impact on the two regions because the Los Angeles market is so much larger than the San Francisco-Bay Area market.

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MS. COLLINS: So in the greater Los Angeles area, it would amount to about 7 percent of existing landfilled volumes in 2003 ramping up to about 11 percent of landfilled volumes in 2010. But in the San Francisco-Bay Area, that basket of facilities would have a huge impact.

It would be 22 percent in 2003, going all the way up to 33 percent in 2010.

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MS. COLLINS: There would be a net increase in recycling due to conversion technology sorting. Again, we've already talked about the net positive impact on glass, metal, and some plastics due to pre-processing. And we also found that there would be no redirection of materials away from current recycling and composting markets because of price differentials. Basically, if you had a ton of bailed cardboard, that's worth some value. You would definitely take it somewhere where somebody would pay you for that cardboard. You wouldn't go to a conversion technology facility and pay to get rid of it.

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MS. COLLINS: So the CT pricing and history findings were very difficult, because there are no operating facilities in the U.S. currently. There are two in development this year in California and New York.

For the larger facilities, most of the ones we were talking about in this study which are 500 tons per day to 1,000 tons per day, the development cost would be about 40 to $70 million, certainly not insignificant. The tipping fees that the facility proponents told us about would range from $25 to $65 per ton. That $65 number is

from the contracts in place with the municipalities in New York and the CT facility that's proposed to be built this year in New York.

The specific feedstock requirements with put or pay provisions, of course, would be highly likely, because you would need guaranteed contracts in place in order to get a loan or to get investors to give you $40 million.

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MS. COLLINS: So I think I've already said this, but to reiterate, why wouldn't paper, plastics, and organics move to conversion technologies? The shortest answer to that is because of pricing. Paper and plastics markets currently -- if you're going to sort the material out, it already has a positive price.

I think I've gotten more buzzes than any other speakers; is that right?

So the CT facilities expect a tipping fee. With that kind of a price differential, that's pretty much a no-brainer. Also, CT prices are competitive with landfill prices. So from the CT facility perspective, they wouldn't want to pay to get materials if somebody is going to pay them to bring them trash.

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MS. COLLINS: Now looking at the materials, there were some interesting findings on paper background,

especially the exports. I know we've all heard about the trends in exports. But it was really interesting, to me, anyway, to get the actual data and to find out that out of our ports in the Los Angeles and San Francisco area, California exports paper to 64 different countries. Some you may never have even heard of. The four-year growth rates have been tremendous, over 60 percent out of our ports from 1998 to 2002. But then when you break the data down and look at it very specifically, all of the growth in paper exports went to China, and nearly all of that growth was mixed paper.

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MS. COLLINS: The next material we looked at is green waste. It's also unlikely that it would go to conversion technology facilities, but green waste is the most vulnerable for pricing reasons. Assuming no diversion credit is given for CT, it's unlikely that green waste would be going to CT facilities because, number one, jurisdictions continue to require diversion credit, either through composting or ADC or mulching, that kind of green waste processing.

Contract prices also are sometimes significantly lower than gate rates. That means that for the municipalities and haulers that have green waste contracts, they're getting significant price discounts.

So they definitely wouldn't go to a more expensive facility.

And, again, from the CT operator perspective, sufficient refuse tonnage exists at higher prices. So why would they want green waste? Why would they want to offer a discount to green waste if they can take in other material at higher prices and have more revenue for their facility?

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MS. COLLINS: Although it's unlikely, organics may be redirected to CT facilities if, number one, separate collection is changed to co-collection with refuse for cost savings. What I mean by that is if there are currently two trucks going down the street, one of them collecting refuse and the next one collecting green waste, you can have some cost savings if you mix that material and put it in the same truck. So that could give you enough cost savings to make it economically viable to take organics to CT.

Also, if tipping fees are similar to landfills but there's a CT facility that is closer, you can save money in transportation costs. So that could be a possibility. And also if the CT facilities decided to offer reduced rates for organics because it's better for their processing, if they have more efficient processing.

So it's unlikely, but these are some conditions where it could happen.

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MS. COLLINS: This slide is titled, "How CT Could Change Institutional Arrangements." But the reality is CT won't change institutional arrangements. CT would have to fit into our existing structure in California. It wouldn't be a big enough change that it would completely fundamentally alter the systems that exist.

Municipalities for the most part control the waste streams either through direct collection of the waste or through the contracts that they have with waste haulers that specify what those haulers are supposed to do. They can change their arrangement if they have the political will and contract flexibility to do so. A lot of times these contracts are seven to ten years, so it takes a long time before you have opportunities to insert new things in the contracts.

Contract haulers can use conversion technologies, but they would need the authority to do so in those same contracts with their municipalities, because usually the contracts specify where the waste is going to be taken.

The one real open area is open competition in self-haul waste would have the most flexibility. They can freely choose where they will take waste, but they also

have the least volume. So they would have the least ability to guarantee volumes to a CT operator. They could take it there the easiest, but they would probably be the least attractive from the CT facility operator perspective.

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MS. COLLINS: In looking at the institutional arrangements, we also looked at municipalities that are interested in conversion technologies and have put out either requests for information or are doing studies about it.

I've only listed a few of them here, but some of the significant jurisdictions are the city and county of Los Angeles, separately looking at CT Santa Barbara County and the Coachella Valley.

And the benefits these jurisdictions are talking about are an alternative energy source through CT, reduced use of landfills, also a local alternative, if they have distant regional landfills, and increased diversion through the preprocessing sorting. But all of them have said they want to achieve 50 percent diversion through traditional means first and then send some of the other 50 percent to CT.

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MS. COLLINS: Some of the last of our findings,

we actually through the financial model spelled out how many jobs could be gained and lost through the various CT scenarios that are in this study. All of them had additional MRF sorting positions to do preprocessing of the material and additional recovered material. And that has its own job and revenue implications down the line. They all had increases from CT facility jobs, and they all had job losses at landfills.

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MS. COLLINS: Lastly, we looked at diversion credit issues. And the short answer -- even though we have several scenarios that looked at this in more detail, but the short answer is if there's no credit or up to 10 percent diversion credit, there would be no dismantling of recycling and green waste programs. It wouldn't be economically feasible. But if there was full diversion credit for CT, there would be a cost savings to the jurisdictions from dismantling separate recycling and green waste collection.

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MS. COLLINS: And then it would really change the whole environment.

And, lastly, the sensitivities of the study, again. This echoes what the previous speakers have said. There are no facilities operating in the United States.

So some assumptions were based on operating information from facility proponents or independent estimates.

Market conditions can change quickly. And the results in the study are very sensitive to market condition assumptions. Also, we assumed for most of the scenarios that current diversion activities would continue, except in that last diversion credit scenario that I mentioned which is covered in the study.

And also the number of jobs and revenues per ton is dependant on information from previous studies. So to the extent that's correct, then the numbers in our report are correct as well. Thank you.

MR. BERTON: Okay. That's kind of it for the actual presentations. At this time we have time for questions and answers from the Board, whatever your pleasure is. And so the contractors and we are available to answer any of those questions.

CHAIRPERSON MARIN: I know we have a couple of -- actually, not. I have about eight speakers. Some of them did not say whether they're supporting or opposing this. So I don't know where they fall.

But I would like to, as the members of our Board, do we listen to as many speakers before we make comments ourselves or questions? I'm going to ask the speakers to come in the order in which I received them. Okay.

Did you bring me the last two? I believe this is right. Okay.

Gerard Kapusuk from Ventura County Environmental Energy Resources Department.

MR. KAPUSUK: Good morning, Madam Chair and members of the Board. For the record, my name is Gerard Kapusuk with the Ventura County Environmental Resources Department.

First and foremost, I want to say both professionally on behalf of our jurisdiction and personally a resounding thank you for conducting and authorizing these studies. They are an extraordinarily important beginning data point to have the dialogue that will certainly ensue from this extraordinarily important, multivariate, highly complicated, but very, very important to the future of California's waste industry and more importantly its resources protection, preservation, and elaboration industries for the future of the state.

I'm a little -- I was thinking of how to simplify all of this in light of the context. And I know that virtually all of you -- I'm sure all of you are here because you share the conscious of Rachel Carson in terms of our environment. You're all also here because you have diversion points of view. You reflect the diversity of the state of California, the fifth largest economy in the

world. And in that diversity, you're also a paradigm or a model of the diversity of our waste or resource stream.

This is an extraordinarily complicated stream. This is an extraordinarily diverse situation. And just as I'm sure you all do not invest in a single stock, the greatest success here is in a diversified portfolio. But one in which conscious choices are made in which balanced interests, in this case at your level, are worked out.

So I ask you as you exercise the wisdom of Solomon on these decisions -- and you will be asked to do that, because, as you can see, this means a reshuffling of how we effectively deal with this important problem of moving away from waste and to resources. And how we do it economically, environmentally, soundly, and politically in the regime that exists under AB 939.

CHAIRPERSON MARIN: If I may interrupt for one second. I'm going to ask all of the speakers to have a maximum of three minutes, because we do have -- now we have two more. So if you could please state your comments clearly, and I will let you know when your time is up.

MR. KAPUSUK: Thank you. I appreciate that.

The simplification I think is that -- and at the risk -- and I certainly don't wish to offend anyone. But at the risk of slightly blurring the separation of church and state for illustrative purposes, I think the parable

of the Old and the New Testament is important here, because I think conversion technology and the future of maximizing movement to resources is designed not to replace AB 939, but to complement, to supplement, and ultimately to fulfill the legislative initiative of minimizing disposal, maximizing diversion, and taking it to the next level, maximizing the inherent environmental, political, jurisdictional, and economic benefits of moving us to a 100 percent resource driven economy.

So I would hope that you continue in this effort. Ventura County has a strong interest in pursuing these matters, as you well know from a variety of partnership arrangements we have. And, again, I offer the invitation to you all to come down to our bio ag summit on October the 14th.

Thank you very much. And we want to be a soldier in this effort, and we want to assist you and work with you to maximize the suit of programs, including conversion technologies, and the promises they have. And I hope you will exercise the wisdom and the will in your judgment to do that. Thank you.

CHAIRPERSON MARIN: Thank you. And you still had six seconds left. Thank you.

Okay. The next person would be Bob Bouton from DTSC, I believe.

MR. BOUTON: Thank you, Madam Chair and Board members. Bob Bouton from DTSC's Office of Pollution Prevention and Technology Development.

I've been to some degree on board with the project since the scope of work was put together, provided comments and review, and attended the workshop, and put in quite a long list of comments. And I'm happy to report that the report and the authors took those to heart and addressed all of the comments that I provided.

I work in the life cycle area, and I think this report really goes a long way. And I'm hoping that the Board begins to look at using LCA as a decision assisting tool to look at all of the waste streams, all of the wastes, and evaluating different waste management techniques. Thank you.

CHAIRPERSON MARIN: Thank you.

Next one will be Paul Relis from Renewable Resources Alliance.

MR. RELIS: Madam Chair, and Board members. First, congratulations, Madam Chair. And thank you, Linda Moulton-Patterson, for your leadership on bringing this issue forward.

I think the two studies before you today are among the most important deliberative issues that the Board's taken up in a long while because they address the

other 37 million tons of material being disposed of every year like clockwork. I think they are perhaps the most in-depth and comprehensive studies of conversion technology, but most importantly, in the context of an AB 939 framework. How do these technologies really impact recycling, composting, and other matters?

Now, on an issue like this, which is obviously controversial, it's important that a body of knowledge be developed that's independent. And I think you were correct choosing the University of California to be the researchers to bring objective information forth to inform this debate and also with RTI with the life cycle assessment. We need a baseline to all talk from.

The findings I think support, as some of us have thought, that there are large benefits, environmental, economic, energy benefits to be captured through the advance of conversion technologies. And it's a happy occurrence I think that they are consistant with the framework that we've worked so hard to develop.

The UC study states that there remains 37 million tons of waste going to landfill, the potential there of 2200 megawatts of electricity or 6 percent of California's energy needs, not an insignificant number, and renewable.

The studies support the position that conversion technologies, particularly gasification, are not

incineration. That's underscored by the UC researchers. This clarification is important to the development of these technologies as current definitions in statute are just not scientifically adequate. They're not scientifically based. Not only are conversion technologies distinct from incineration, but the whole context in which that whole debate began was in the '80s when we had no recycling infrastructure and people like myself fought incineration because we knew it would thwart recycling and composting. That is clearly not the case today with the multi-billion-dollar investment in our infrastructure.

So let me conclude. In the interest of time, I'm -- how much time do I have?

CHAIRPERSON MARIN: About ten seconds.

MR. RELIS: Ten seconds. I want to thank you for bringing these studies forth and giving us a body of evidence to work from. And I know I look forward to participating in whatever follows from this meeting today, if there is something after all this interference.

CHAIRPERSON MARIN: The three minutes is up. I guess that was the way to say it. Thank you, Mr. Relis. And I know that as a former Board member, this was also very important to you. So thank you very much.

The next one is Monica Wilson from GAIA or GALI,

Global Alliance for Incinerator Alternatives.

MS. WILSON: Good morning. Thank you. My name is Monica Wilson. I'm with the Global Alliance for Incinerator Alternatives. I'm also on the Board of the Northern California Recycling Association. I'd like to present some serious concerns we have about these reports and as well about the technologies of gasification and pyrolysis and other incinerator-like technologies.

I'd like to say that we do not believe gasification, pyrolysis, and other incineration approaches are the way forward for California. And we hope that by pursuing -- the Waste Board would not consider moving California backwards by looking at what I would consider retro kinds of technologies.

There's some serious toxic emissions and waste concerns about these technologies. Contrary to statements in the agenda summaries for Items 16 and 17 today, there are both environment and environmental justice impacts from gasification and pyrolysis. And I'm going to limit my remarks to those two technologies, because I believe that the whole umbrella of conversion technologies is far too broad to truly understand what is happening here and to truly understand the actual technologies that we're talking about. So I'd like to really focus on those kind of technologies, those high temperature technologies.

They have high toxicity and liquid residues. Although pyrolytic oils are listed as a primary product, it's actually true that municipal solid waste pyrolysis -- pyrolysis of municipal solid waste has the highest portion of dioxins in the pyrolytic oils. So I'd just like to point that out.

I'd also like to point out that the Stockholm Convention on Persistent Organic Pollutants, which the U.S. has signed, works for focusing on the elimination of dioxin creation. I think we'd be going down the wrong path to find new sources of dioxin creation in California.

I think it's unconscionable for the life cycle analysis report to conclude there's insufficient data regarding creation of dioxin and other hazards. And I would really like to encourage the Board to look, again, at the solid and liquid wastes that are coming out of these facilities, because those are crucial, crucial concerns that may be more important -- we're not sure -- than the air emissions. But they need to be looked at collectively.

Again, I'd just like to say that these sorts of technologies -- these sorts of incinerator-like technologies are not the way to move California forward. And the reality is on the ground that the claims by vendors, which are the same sorts of claims we see in

these reports, are not being backed up by data and cannot be backed up by the vendors when pressed. For example, in the community of Chowchilla, Northern American Power Company claimed there would be no emissions from the pyrolysis facility. When pressed, North American Power withdrew their application to build a facility instead of providing any information to the city, and in the last year I don't believe has submitted any more information or pursued that operations request.

In the City of Hanford, the Air District rescinded permits for the Plastics Energy Pyrolysis facility, because the facility had claimed there would be no emissions. And, yet, when pressed, once again, there was no information provided by the vendors to show that this was actually true.

So I think we need to be really careful of looking at what is the reality behind vendor claims and be very careful to not be dissuaded by these sorts of claims which so far have been pretty unsubstantiated.

CHAIRPERSON MARIN: Thank you, Ms. Wilson.

MS. WILSON: Thanks again.

CHAIRPERSON MARIN: The next person would be Scott Smithline from Californians Against Waste.

MR. SMITHLINE: Good afternoon, Madam Chair, Board members.

This being my first opportunity to address the Board under your new leadership, congratulations. And I'd also like, just before I begin my comments, to thank the staff, particularly Fernando Berton, who's spent a considerable amount of time in answering my phone calls and e-mails trying to help guide me through those 3- or 400 papers of documents. So I think you should be commended for the work he's doing.

Californians Against Waste is always interested in learning about new technologies that are going to take something bound for the landfill and turn it in to an environmentally safe way into either a good or source of energy. That's why we supported in 2002 this legislation and were actually part of the policy discussions back at that time.

Since then, we've supported various conversion technology projects, and we've supported the Board's process in developing conversion technology regulations. So it was with some disappointment that we received and reviewed these documents. Disappointment regarding really what we think is a lack of important data on the actual technologies themselves.

AB 2770 gave this Board a mandate to review certain technologies for their environmental desirability and performance. And, unfortunately, per our review, it

seems like these reports are based largely on estimates and extrapolations and do not provide the data that you will require to make those determination.

Just to look at air emissions data as an example, two out of the three technologies studied, catalytic cracking and acid hydrolysis, don't have any data that I see in the report. I see estimates and permit limitations, but I don't see the actual data reports. The data reports we have on gasification are very limited, and as we heard from the contractors, are not verified by third party. And we don't know what the methodology is for those data.

And I think the disclaimers are clear in these reports. They are throughout the reports, and there are things like an order of magnitude study. There are considerable uncertainties, there are high levels of uncertainties. All these statements regarding environmental performance of these technologies. And I think we have to heed those disclaimers.

The LCA itself states they have not completed an impact assessment. And it states that the Office of Environmental Health Hazard Assessment will be completing that. But the Board has received a letter by OEHHA saying we can't complete that assessment because the data is not there.

So to sum up this main point, you know, you can't make environmental and public health life cycle impact assessments without proper data. We just simply don't have the data to make at least those reports back to the Legislature under AB 2770.

We have a couple other quick concerns I want to touch on, the first being flow control. This issue comes up throughout these reports. You can find it in findings, like finding Number 7 of the market impact assessment on page 94. The finding says that -- if I might just paraphrase, CT might negatively impact future recycling from untapped waste streams, but impact will be minimal. They're claiming this impact will be minimal basically because of the high cost of tapping that waste stream and because these waste streams are already caught up in contracts between municipalities and haulers.

But the report assumes that basically all these conversion technologies are going to be required to have 20 years or so put or pay contracts that are going to lock up the waste stream and essentially continue what we think is a regressive policy of these long-term contracts which continue to make the waste streams unavailable for new recycling efforts. Californians Against Waste is against those contracts that lock up the waste stream. And, finally, we are concerned -- do I have about 30 seconds or

so left?

CHAIRPERSON MARIN: You have ten.

MR. SMITHLINE: We're very concerned with the life cycle impact assessment on energy recovery. It is a complete departure from what has historically been the case in terms of energy efficiencies of comparing recycling to waste energy. This report shows upside down numbers. And I think until we have time to peer review that, we think it should be viewed with skepticism.

And finally -- all right. I'll comply with your three minutes. Thank you very much.

CHAIRPERSON MARIN: Thank you very much, Mr. Smithline.

The next person will be Jane Williams with California Communities Against Toxics.

MS. WILLIAMS: Good afternoon, members of the Board. I'm Jane Williams, California Communities Against Toxics. Represent many of the communities where incinerator proposals have been proposed over the last 15 years in the state. Most of them have been defeated.

I also come to you wearing a number of different hats today. I served on a Federal Advisory Committee on combustion for three years, and I also chair the Sierra Club's National Air Toxics and Combustion Task Force. So this is a topic that I'm extremely familiar with.

And let me just say, first of all, that the definitions of incineration are very clear in federal law. And gasification and pyrolysis are both included. Let me also say that we have done quite a bit of work over the last ten years to regulate emissions from these types of technologies. And it might interest you to know that Congress passed the original Clean Air Act in the mid 1970s, and they told EPA to look at the toxicity of different hazardous air pollutants.

Well, after 25 years, they had only looked at the toxicity of less than half a dozen of them. So when the Clean Air Act amendments were signed by the first President Bush, they went to a complete technology-based program. So the emission limits that are placed on these types of facilities emitting hazardous air pollutants are not standards that protect public health. They're technology-based standards.

So when you see claims in these reports they would meet emission limits, first of all, I'm not convinced because we don't have any emissions data. Second of all, the emission limits are not based on public health protections. That is why you have seen over the last 15 years in California and will continue to see a tremendous amount of concern about public health effects from the emissions from these facilities.

Now, if I came to one of your communities and I said I was going to put in a waste treatment system that emitted plutonium, it would probably make the front page of the paper. And it might interest you to know that dioxin has actually a steeper cancer slope than plutonium, meaning it is more carcinogenic.

Dioxin is not the only problem, by the way, from these combustion type of technologies. There's a number of different products of incomplete combustion, including bromated dioxins from furan, as well as PCBs and other very nasty hazardous air pollutants.

And the reason the public is so concerned about these is because there was a reassessment of the toxicity of dioxin, and EPA said a provisional reference dose of .01 picograms per kilogram per body weight per day. That probably doesn't mean very much to you. But if you look at the national debt and you make it smaller, you would have to go even less than that. We measure the national debt in trillions, and we're measuring the amount of dioxin that can be in your body and not cause health effects at 10 to the negative 12. The fundamental problem with these technologies is you measure emissions and nanograms per cubic meter, but what is dangerous in your body is an order of magnitude below that. And that is why community after community after community in California

has said no to incinerators.

When my organization was formed, the laser project was proposed, which probably many of you remember. There were twelve operating hazardous waste incinerators in California, twelve proposed, and 150 medical waste incinerators. There's less than half a dozen medical waste incinerators. There's only one hazardous waste incinerator, and only three municipal waste incinerators. That is because the public will not stand for it.

CHAIRPERSON MARIN: Thank you, Ms. Williams.

MS. WILLIAMS: Thank you very much.

CHAIRPERSON MARIN: Okay. The next one is Mr. Gary Liss with Gary Liss and Associates.

(Thereupon an overhead presentation was presented as follows.)

MR. LISS: Madam Chair, members of the Board, thank you for the opportunity to speak here today.

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MR. LISS: I have a brief presentation that I'll be handing out. And I'd like to highlight that the --

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MR. LISS: -- key issue I want to address in my presentation -- I agree with all the last three speakers on the serious concerns about this report. I agree wholeheartedly with everything they said.

You need to understand one equals 71. For every ton of garbage placed at the curb or buried in a landfill in California, there's an equivalent of 71 garbage cans of waste created in mining, logging, agriculture, oil, and gas exploration, and industrial processes ahead of that. So when you're talking about what is the proper boundary for life cycle analysis, we believe you need to go upstream. And we don't believe -- we think that the reason why the numbers aren't coming out in this report the way we think they should is because the boundaries are not accurately connected.

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MR. LISS: In presentation, Dr. Jeffrey Morris, a key economist in the zero waste field, highlighted at the International Dialogue of the Global Recycling Council that you sponsored a couple weeks ago -- he highlighted the product's life cycle including resource extraction, mining, distribution. And when he looked at --

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MR. LISS: -- those types of issues, the key measure you need to understand is the red on the slide is the additional energy required to make products out of virgin materials compared to recycled materials. And capturing that energy is key to the energy savings that are much more significant than the energy produced by

burning the waste that you're talking about.

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MR. LISS: In San Luis Obispo, Dr. Morris looked at comparison to landfill gas collection and energy generation --

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MR. LISS: -- and he looked at compared to waste to energy systems. And in those slides, which I agree are complicated, if you look at the big blue -- the net recycling impact versus the little blue, net garbage impact, there's much greater savings of energy in the recycling system -- the recycling life cycle versus the trash life cycle is the RLC versus TLC.

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MR. LISS: When you look at it compared to energy recovery, recycling still saves more energy than is produced by garbage incineration with energy recovery.

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MR. LISS: He tried to translate that into economic values and showed that for landfill gas projects and waste to energy projects, recycling would save $57 a ton compared to landfill gas projects and $44 a ton compared to waste to energy when you consider the variety of environmental impacts associated with that.

Finally, zero waste is zero to landfill and

incineration. Gasification and pyrolysis are defined in this country and in Europe as part of incineration. It's the high temperature facilities that we're most concerned about.

Air impacts. You can't evaluate air impacts if you don't have the data. So to make conclusions that these are okay when they say there's data not there just doesn't make sense.

Diversion credit is inappropriate. That's only one of many stakeholder comments that were made. Many of ours were made that were not included. Diversion credits should not be even on the table.

And we don't want to subsidize these technologies with grants and loans. And conversion technologies are not better than landfill. The answer is producer responsibility, zero waste with the twelve master categories. We don't have to burn this stuff. We get more out of it by reuse, recycling, and composting.

Thank you.

CHAIRPERSON MARIN: Thank you, Mr. Liss.

The next one will be Mr. Bill Mcgavern from the Sierra Club.

MR. MCGAVERN: Thank you, Madam Chair. Good afternoon.

Up until now, conversion technologies have been

kind of a black box into which were lumped many dissimilar technologies. And I think these reports give us the ground -- lay the groundwork for starting to differentiate among those technologies, because we really shouldn't be putting them all in the same category.

One of the staffers in presenting the reports said something about "whether you're for or against this technology." Well, there is no "this technology" to be for or against. So we need to get out of that mind set and be more specific.

All of this discussion is focused really on what we do at the back end. Of course, we think most of the Board's focus should be on the front end. And as Gary Liss has just presented, recycling will actually save far more energy than is going to be produced by any of the technologies under discussion.

The environmental community has got very serious concerns about, in particular, the thermochemical technologies. And I think this is the first Board meeting I've been to where there have been more environmental speakers than industry. So that's a sign of how seriously we take this.

These thermochemical technologies may not be identical to incinerators, but they're probably more similar than they are different and are classified as such

in many jurisdictions. One of the assumptions in the report is that we're going to have basically perfect separation of materials. And we certainly should not assume that until it's actually proven in the real world that we're achieving that. And if you change that assumption, I think you change a lot of the results.

The concerns, of course, arise over air emissions of dioxin and furans, air emissions mixes of heavy metals like mercury and led, solid waste residue, which will again include dioxin. And U.S. EPA has found that dioxins are so high in our bodies, they're actually changing our biochemistry. And as far as we're concerned, if it's changing our own bodily chemistry, then it's a big problem.

Pyrolysis supposedly has no oxygen, but there will be oxygen in the waste materials. So that will bring oxygen into the process producing dioxins.

As one of the reports acknowledged, there have been problems with accidents and gas leakage in real world facilities. The lack of data here -- emissions data from actual facilities is a real concern. And to have this expensive and lengthy process and get to the end of it and still not have that real world data is very disappointing. Because without that, there's no justification for going forward with any policies that promote these

thermochemical technologies.

A very troubling line in the report said that there's been a lot of environmental community opposition to the high heat technologies, and that's mostly because of a misperception that they're similar to mass burn. This really reminds me of the same way the proponents have approached incinerators and nuclear power plants. The opponents must be ignorant. They don't get it. We do. And so the next proposal will usually be, let's educate the public this really is good for them. That's the wrong way to go about it. It would be a big mistake to proceed that way.

I'm also troubled to see the comment that, well, the definition of gasification in law is technically inaccurate. That definition resulted from a policy choice by the Legislature. And, actually, we didn't support the bill. But that definition was negotiated between industry and the Senate. And there were reasons for that. So to just say, well, it's technically inaccurate, we've got to change it, would ignore the very real policy discussions that went into that.

So, in conclusion, it would be a big mistake at this point to go forward with diversion credit or outright subsidies to unproven technologies that in the real world would probably have very damaging environmental impacts.

CHAIRPERSON MARIN: Thank you, Mr. Mcgavern.

Thank you. Two more, if Board members are still here. Brian Mathers from the Alameda County Waste Management Authority.

MR. MATHERS: Thank you, Madam Chair, members of the Board.

The Alameda County Waste Management Authority Source Reduction Recycling Board is a Joint Powers Authority of the member agencies, the jurisdictions within Alameda County.

In 1989-1990, we adopted a 75 percent diversion goal, and it was passed by 60 percent of the voters of Alameda County, to reduce the waste 25 percent beyond what the state mandated in AB 939. I think that while these studies are very comprehensive in their approach to the scope of work, I think there's some flawed conclusions. For example, in the study of the waste characterization, they included food waste as a high volume material. In Alameda County, many of our jurisdictions are adopting residential food waste and commercial food waste collection programs. In the city of Alameda itself, the diversion tonnage has actually doubled by introducing residential food waste programs.

So for the biological conversion technology, this material wouldn't be there and creates a conversion

technology that would be in direct competition to a composting facility that would be using it as a feedstock.

While we recognize HF&H as a leader in economic and market analysis, I think that there's some flawed conclusions with regards to tipping fees. Many of the tipping fees in California are overinflated because of the fees that have been attached to them: Disposal fees that we collect for household hazardous waste, for facility fees, for impact fees for import. And when you get down to the nuts and bolts of actual cost of disposal, we're looking at costs between $10 and $20 a ton. We've seen disposal contract agreements with landfill companies in that range of 12 to $20. And so to say that conversion technologies are in par with disposal is an inaccurate statement and I think results in a flawed conclusion.

It's naive to believe that hauling companies that own landfills would not start to drop the price of disposal to compete with a conversion technology which would be, therefore, migrating their waste away from them. You know, this is a capitalistic system. We want to answer to Wall Street.

I think that some of the prior speakers spoke to the emissions factor. Conversion technologies, the report acknowledges, would have higher emissions of dioxins, furans, mercury. All of these are in orders of magnitude

much higher than landfilling and composting. We are in the process of developing more composting in Alameda County, and it's important these feedstocks don't migrate from that potential.

I just have one other point. If we call the tail of a dog a leg, how many legs does a dog have? Well, the answer is four, because calling it a leg doesn't make it a leg. If you look all these technologies, they all have resulting products of emissions and char or ash. And just because we've added a step of gasification or pyrolysis in the mean time, you cannot separate the smokestack from these technologies. So I think that that's an important distinction or understanding to come to.

Thank you very much.

CHAIRPERSON MARIN: Thank you, Mr. Mathers.

And the last speaker on this item would be Mr. Evan Edgar from CRRC.

MR. EDGAR: Madam Chair, Board members, my name is Evan Edgar from the California Refuse Remove Council. I represent over 50 MRFs and 12 compost facilities statewide. And we support the conversion technologies and support the concept of getting AB 939 diversion credit for conversion technologies.

We also want to investigate the concept of MRF first where there's some pre-processing of materials prior

to going to the conversion technologies where right now there's over 37 million tons being disposed of. And that would be the competition to take those organics and put them through a conversion technology process.

One of the reports -- pretty fast with regards to the commercialization of conversion technologies was a big mixed waste, mass burn, kind of black box concept, I believe. And what we're seeing is that it will start slower, more regional, with source-separated green waste and wood waste that doesn't have the commingled aspect of mixed MSW. But it will be a smaller scale, cleaner feedstock where you won't have those types of emissions where you make ethynyl out of that green waste and wood waste whereby we have fuel supplements to replace MTBE here now, and that's the starter as part of the conversion technologies. We can't go from zero to 60 miles per hour with mixed waste black boxes, but we can with source separated feedstocks to make ethynyl.

I believe the life cycle analysis has a fallacy with regards to not recognizing the export aspects of impacts. It assumes all the domestic stuff stays here in the state, where we know that China has taken a lot of this material up.

We believe that conversion technologies will create a lot of jobs, and with regards to having green

energy here in California. Right now we have RPS standards of 20 percent by 2017. That's going to be accelerated by the Governor with a new bill this year. We believe in the eco industrial complex as the next starter for California with regards to creating energy products in California for Californians out of recycled products. We believe that we can recollate a lot of the conversion technologies at our MRF facilities.

With regards to co-location, we have existing infrastructure. And with a MRF-first policy in place, the residuals that cannot be recycled and cannot be shipped out stay within the region producing ethynyl and energy byproducts here at home.

We believe in multi-media solutions where we produce clean fuels for clean fleets for clean air with valid air permits. I believe that the Air Boards have air emissions permits in place. And any of the technology that would come in force would have to go to the air permitting process. With a cleaner feedstock, we won't have those emissions concerns.

This is not back to the future. We're not going retro hip with incineration. I think the future is here and now. I believe that we have a whole new opportunity to create jobs and a whole new opportunity in order to keep energy products here at home. And that type of

security we need for our resource management.

We support a lot of concepts in the report. We're going to participate in the workshops in order to get a little more clarity on how this can start out in small modular regional type of cleaner feedstocks, as opposed to mixed waste at larger facilities right off the bat. Thank you.

CHAIRPERSON MARIN: Thank you. You had ten seconds. That is wonderful.

Okay. The last one. I think somehow I had missed this one. James Stuart with BRI Energy, Incorporated.

MR. STUART: Thank you. My name is Jim Stuart, and I'm with BRI Energy, which is a company that has achieved a major breakthrough in the co-production of electricity and ethynyl and/or hydrogen from any carbon-based waste or from hydrocarbons.

I'd like to point out that Bill Mcgavern said there are many, many different technologies here. That is very true. And in our case, the synthesis gas created from the gasification process does not enter the atmosphere, but is instead scrubbed and fed to a bacteria culture which ingests that synthesis gas and within one minute reconstructs it into ethynyl.

The electricity is created from the waste heat,

which is achieved by the cooling of the synthesis gas and it is not combusted in order to produce electricity.

The diversion of waste from landfills is a fundamental policy of the Waste Board, and looms as an important societal issue. However, 15 years after AB 939, as has been said, there is something on the order of 37 million tons of material in landfills today that's organic. In the case of the BRI technology, these organic wastes could support the co-production of more than 1.5 billion gallons of ethynyl and 3,000 megawatts of power, enough to turn California, which is currently importing about a billion gallons of ethynyl per year, into a net exporter for the state.

The life cycle and market impact assessments conclude that conversion technologies represent technically viable options for conversion of post recycled waste. We believe the flexibility of our technology also makes this true for other feedstocks, including wood waste, sewage sludge, and agricultural residues.

Consistent with these findings and recognizing the need to implement 21st century technologies for the disposal of waste, not technologies that are based upon what happened in the last 30 years, the creation and a need for the creation of electricity and liquid energy, the Integrated Waste Management Task Force of Los Angeles

County is seeking to create a conversion technology demonstration plant that will consume 100 tons of municipal waste per day. The Task Force hired URS Corporation to guide the technology selection process and mentor the program.

Last week, URS provided the Committee with this schedule indicating that in the current state legislative and regulatory environment, this demonstration plan, even if fast tracked, could not begin operation until March of 2009. Between now and 2009, when the County of Los Angeles hopes to get its 100-ton-per-day demonstration facility in place, more than 120 million tons of post-recycling organic municipal waste will have been landfilled in the state of California.

In contrast, BRI Energy working with Parson Corporation and Katzen International, two engineering firms with long experience in waste disposal and the production of ethynyl, this week began the design of a nine-million gallon ethynyl plant that we expect will be operational in the state of Washington by the fourth quarter of 2005. Its feedstock will be municipal solid waste and auto fluff.

This is a stark example of the outdated regulatory framework that has evolved in the state of California, a situation that could be greatly exacerbated

by the Waste Board's proposed conversion technology regulations, regulations that qualify CTs as major waste disposal plants rather than manufacturing facilities. CTs do not dispose of organic waste. They destroy them, leaving only about 5 percent of the gasified material as an inert ash.

BRI's ethynyl production and electricity generation plant can also operate on gasified coal and natural gas. And if we were to use these feedstocks rather than organic wastes, BRI's facilities would be classified as manufacturing operations. In the 21st century, we need to begin thinking of products like used tires, MSW, and agricultural residues as fuels rather than waste.

CHAIRPERSON MARIN: Thank you, Mr. Stuart. Thank you very, very much for your comments.

MR. STUART: I appreciate it.

CHAIRPERSON MARIN: Okay. To my fellow Board members, we can discuss -- I know that you can stay for a little longer. I want to know what the pleasure of the Board is. If we take a break now, we'll lose Board Member Patterson. If we continue until at least 1:30, we can go and do as much as we can. Maybe we can finish the entire agenda by that time. Shall we try to do that then?

Well, we've heard a lot of wonderful comments for

and against the report. And I will now like to entertain comments from Board members.

Mr. Paparian.

BOARD MEMBER PAPARIAN: Thank you, Madam Chair.

And this item was originally going to come to the Committee, but I thought was important to have it come to the full Board to get the full flavor of the discussion. And I think that some of the next steps, as I understand them, we still have to produce a report to the Legislature for AB 2770. The reports you heard today were not the report to the Legislature. We're going to be producing a separate report which will build on these, use these as background, but is intended to include additional information. I think's something the Committee will be working on with the staff over the next few months.

Some of the things in that report are going to be challenging to come up with, as we've heard today. The Legislature asked us very specifically to look at and evaluate the life cycle, environmental, and public health benefits of each of these technologies. I think we heard from a number of people today that the facilities where this information could come from were not forthcoming with the information that would allow us to conduct that evaluation. That's why the Office of Environmental Health Hazard Assessment yesterday sent us a letter saying we

can't do these kinds of assessments because we don't have the data. The industry hasn't provided the data. A lot of that data is in Europe and Japan. And the facilities, for whatever reason, weren't willing to share that information.

We're also supposed to provide the Legislature with an identification of the cleanest and least polluting conversion technologies. That might be a little bit easier, but it will still be challenging. I think it's pretty clear from what we've heard and seen in the reports that the anaerobic digestion conversion technology stands out that I think everybody can agree is a conversion technology that has a lot of benefit and fewer impacts, potentially, than a lot of the other technologies.

And then, finally, we're supposed to take this report that we produce and we're supposed to get it peer reviewed by the University of California. So I think we've got some challenges ahead.

You know, if we were going to put any more resources into this, I think trying to extract that information from Europe and Japan would be important. And I don't -- I know Fernando would love to get on a plane. He'd go today probably and get that information.

MR. BERTON: I'm packed already.

BOARD MEMBER PAPARIAN: But I think that

information would be important.

And as well, we have five conversion technology facilities that I count that are either being built in California and are pretty far along in the process. Five of them. And I think that as we look at this technology over the next few years, we ought to be able to get some in-California data from these facilities that are already being built in California. There's one in Davis. There's one in Lancaster. There's a number of others that are out there using these technologies that I think we'll be able to learn from. So I think the Committee will be looking at these as we develop this report to the Legislature.

CHAIRPERSON MARIN: One of my questions to staff -- and you're saying that we have five that are being built. Obviously, not one is operating. Are there any industries -- I know that there's not for MSW. But are there any other industries that would utilize in the United States any kind of CT?

MR. BERTON: Well, yes. There are actually a number of coal gasification facilities that are operating now.

And anything else, Rob?

MR. WILLIAMS: Yes. All these facilities or technologies have been or can be used on fossil fuels, the thermochemical facilities. The AD systems are existing

with a lot of animal waste lagoons and tank digester systems. And there are some jurisdictions in California, I believe, that are taking source separated food waste for digestion in the wastewater treatment plant which is similar technology.

CHAIRPERSON MARIN: Because my question would be what would it take to extrapolate or derive some of the information of existing CTs? The feedstock would be different. I think it would be pertinent or prudent to look at how those other CTs are being employed, what the results are, and to the degree that we can attempt to alleviate or explore the concerns that have been presented by the people expressing some opposition to what we're attempting to do.

I don't have a Ph.D. on this. But I'm wondering whether there is some benefit to exploring what's out there already in CTs, even though it's not -- the feedstock is not MSWs. Would that be something that could be at least looked into?

BOARD MEMBER PAPARIAN: I mean, I think there are some facilities using waste in Europe and Japan. I think reports pointed that out. But the authors of the report could not get the information on emissions at those facilities. I think that's even a stronger paralegal to what we're doing.

I think as we look and we segment these technologies, you know, there's anaerobic digestion and there's the other things. We'll be able to get varying levels of information on each of those technologies. And I think that will be important to let the Legislature know that there are differences in the conversion technologies.

CHAIRPERSON MARIN: Great.

Ms. Mulé.

BOARD MEMBER MULÉ: Fernando, I was wondering if you could respond to the Chairwoman's question, number one. And number two, a question I have for you is when is that Riverside facility supposed to be operational, the anaerobic digestion facility? Thank you.

MR. BERTON: The question of looking at other facilities that take different kinds of feedstock, that certainly is a starting point. The one cautionary point would be to try -- would that be construed as sort of apples to oranges comparison in terms of coal versus MSW or something like that? It certainly is a starting point. I don't know if it sounds like lobbying to go to Europe and Japan or not.

But wherever we can acquire data, data is good. And third-party verifiable data is even better. And that's why we have as one of the recommendations that we think should be in the report to the Legislature are some

additional studies to address those data gaps. And it could be from a multitude of sources. And it could be sort of a comparative analysis as well of different technologies and those different feedstocks and all.

One thing that we need to also take into account is that the data and emissions that we get that we could try to get from Europe and Japan, their reporting units might be different than they are in California. The emissions limits and the methods to get to those limits might be different, the test procedures. So those are things that we need to take into account as well.

Anything else you'd like to add, Rob?

And the question about the Riverside facility. My understanding is that they have narrowed it down to two anaerobic digestion vendors. They're still going through sort of the final negotiations to determine who the final one will be. And it will be -- I think they would try to get the construction going sometime in 2005. There is a facility at UC Davis being constructed right now, anaerobic digestion facility, that's under construction right now that would take animal bedding, some of the yard waste, and any of the food waste. Rob would have more information on that.

MR. WILLIAMS: The pilot plant they're building at Davis would take animal waste, animal bedding, other ag

residues, and some source separated food waste and green waste.

BOARD MEMBER MULÉ: And when do we anticipate that being on line, if you will?

MR. WILLIAMS: I'm not sure. Professor Jenkins is in the back.

PROFESSOR JENKINS: The plan is to be finished in the November time frame. Whether it actually will be or not, I'm not sure. Sometime this year.

CHAIRPERSON MARIN: I didn't hear.

MR. WILLIAMS: He said it's supposed to be completed in the November time frame this year. But it might be a little bit later. Within six months, probably.

BOARD MEMBER MULÉ: So we're looking at a facility being on line within the next six months? And with that being on line, we can start collecting the data then?

MR. BERTON: Yes. That would be -- yes.

BOARD MEMBER MULÉ: Thank you.

CHAIRPERSON MARIN: Okay. So the pleasure of this Committee. I think the next step would be to hold some workshops.

BOARD MEMBER PAPARIAN: I think they are.

MR. BERTON: I was going to -- Board Member Paparian went through a lot of what was going to be in the

report to the Legislature, some of the minimum requirements.

But I think Bill Mcgavern and Monica Wilson what they have said in the past is that conversion is maybe too broad. And they're right. So that's why I think what would be a way to go in the report to the Legislature is to sort of parse things out a bit. Look at defining thermochemical conversion or biochemical conversion or even thermochemical or biological, sort of separate things out so that there's maybe a little bit more clarity on what we're talking about.

BOARD MEMBER MULÉ: Excuse me, Fernando. Could you just outline the next steps that staff is anticipating so everyone in the room has an understanding of what you're planning on doing?

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MR. BERTON: The next steps after this would be we would have a public workshop Friday, October 1st at 9:00 a.m. in the Sierra Hearing Room, just right over next door, to discuss what -- aside from what we would think should be in the report to the Legislature, things that the public stakeholders think should be included. And then bring some kind of discussion item back to the Board, likely November, to the Committee and the Board and just start from there. Like I said, when I first started the

presentation, this is just the journey, starting.

BOARD MEMBER MULÉ: So then this would be -- what would come back to the Board in November would be a revised draft, or would it be the report or a draft of the report to the Legislature? I just want to make sure everybody has a clear understanding of where we're going with this. Thank you.

BRANCH MANAGER FRIEDMAN: This is Judy Friedman.

We're talking about bringing in November for discussion a proposed draft report to the Legislature.

CHAIRPERSON MARIN: Now let me ask you this. I know that this came directly to the Board. Would it be better to go to the Waste Committee first and then come to the Board for much more ample discussion?

BOARD MEMBER PAPARIAN: Yeah. I think we can get into in the Committee some depth of the report and help, you know, prepare it for presentation to the full Board. I think what we did today was in part because this is such a huge effort, so important to the whole Board, and the availability of all the contractors. You know, frankly, there's a cost involved to bringing contractors out more than once. But, yeah, I think going to the Committee we can help flush out some of the issues and prepare it for the Board.

CHAIRPERSON MARIN: Well, that sounds very good.

Is that all the direction you need, Patty?

DEPUTY DIRECTOR WOHL: Sure. That's fine.

CHAIRPERSON MARIN: Thank you.

Okay. We are going to go now to Item 2. That's the last item, and we should be able to get out of here.

Is someone presenting Number 2? Our distinguished attorney.

STAFF COUNSEL BLOCK: Elliot Block from the Legal Office. I've got the enviable position of doing this at five to 1:00 when everybody is hoping to get out of here.

(Thereupon an overhead presentation was presented as follows.)

STAFF COUNSEL BLOCK: I will try to do this as briefly as possible.

As many of you know, but as some people may not know, the Board back in 1991 adopted some meeting and agenda and Board and Committee procedures. And we have not -- and by the way, a copy of that is an attachment to the item. You'll notice it's a faxed version. It's the best we could do. We didn't have it electronically. Times have changed a lot in 15 years. We never updated it, revised it, or terminated it, but we've actually continued to use it more or less. But anybody looking at it can see that it's got some names wrong, some terms wrong, that sort of thing.

So the item before you today is to talk about that and talk about -- I've separated into two parts, both updating -- what I'm calling updating the procedures and then talking about the proposed revisions.

So the first part of the item in terms of talking about updates are just those very simple things. Things like reflecting changes in terminology, those procedures talked about a CEO rather than an Executive Director. Committee names are different. We now have a BAWDS system. Those updates are contained in Attachment 2 in the item in strike out, underline. And, of course, what I'd like to emphasize is in terms of those changes, nothing that we're talking about in terms of the updates are changing the procedures that we've been using. They're just updating those.

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STAFF COUNSEL BLOCK: Now, the second part of the item -- and this is what you'll see reflected in Attachment 3 in the italics -- is to talk about -- I'm going to zip through this a little faster. But please feel free to stop me if I'm going a little too fast.

It's in italics in Attachment 2. This is really to reflect over the last 13 years from time to time we have a lot of issues that come up that are more related I think to meeting procedures as opposed to the logistics of

Board meetings. We always find ourselves referring to Roberts Rules of Order. I have a visual aid. That's what my copy looks like nowadays. It's a mess. And you know it's a few hundred pages long. It's just not practical for us to use.

So one of the nice things about the procedures that we have and even in the Attachment 3 version, which is now stretching to seven pages or so, which is longer than I'd like, but it's a tremendous improvement from having to look stuff up in this every time. And one of the problems with Roberts -- well, it's got some helpful information. And one of the revisions I'm suggesting is we continue to look for guidance sort of as a safety net. It's really designed for different kinds of meetings than the Board. It's designed for what they call assemblies and that sort of thing. You always end up having to take the rule and then try to translate it into what we do at the Board.

At the risk of taking a little longer, interestingly enough, I was trying to look things up on Amazon.com while I was preparing for this, and they actually had a publication, a simplified version of Roberts Rules of Order. And then in looking at the details, it was a 430-page book. So that wasn't too particularly helpful.

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STAFF COUNSEL BLOCK: Again, please feel free to stop me if I'm jumping too fast.

There are a number of things in the item. I think it ends up being about ten of these sort of issues that I've identified. I'm not going to go through them in detail now. But if there's a particular one you'd like to talk about, you should feel free to stop me. But, again, what I try to reflect in Attachment 3 is basically the most recent Board practice. And in some cases it's only come up once. But as I've been able to remember these things over the last -- I've been here twelve years. I will give you the caveat that my memory is not always perfect. So if anybody does remember something different or some things come up, you know, I believe now is the time to raise that.

But I will also say one of the important things that I think is useful about revising this is, number one, you've got full latitude today to change anything, talk about that, frankly, even put it off and have me come back next month if there's some things that strike your fancy. But also more importantly that I think by bringing this up now, revising these, updating them, it's a living document. It now is kind of out here. And over the course of the next six months, the next year, maybe

periodically, whatever, I think it's going to be much easier for us to go in and if something's not working, to make some tweaks. As a practical matter, we've been doing that for the last 13 years, but we've never reflected it in writing. So that's one of the reasons we want to bring this forward is it's just a little bit strange.

BOARD MEMBER MOULTON-PATTERSON: Just for the record, we did try one time and it was derailed by a Board member. You know, I just want to put that on. Excuse me for interrupting.

STAFF COUNSEL BLOCK: Okay. Actually, I've probably at various stages worked on this two or three times over the years.

But it looks a lot more complicated than it is, and that's always the problem. There's a lot of details. So I realize I raced through that fairly quickly, but I do need to raise a couple other issues.

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STAFF COUNSEL BLOCK: As part of talking about how when you're trying to capture in seven pages a lot of details about how we run meetings, there's always things that you miss. There's some things over the years that one or more of us have taken for granted. And when you take a look at it, you realize something else needs to be added into that list.

So, for instance, you've got a revised item before you because somebody noticed last week that the Attachment 3 -- that was related to the direction, Board direction items. And I had neglected to add a sentence in there that talks about the normal process, which is what we've been doing for years when we have Committees, is direction items only go to the Committee, unless there's a reason to forward onto the Board. So I added a sentence on that.

Monday, a couple other things came up. So let me -- and I obviously didn't have time to get that into a revised item.

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STAFF COUNSEL BLOCK: But I have a nice big overhead here. And, again, if you want more time to look at these, unlike some of the time sensitive things -- we'd like to get this taken care of today, obviously, but we can always deal with this next month if you'd like.

But along those same lines -- and I think this has come up a couple of times today -- the existing procedures talked about how everything had to go through a Committee first. As a practical matter, on numerous occasions, we oftentimes have items go directly to the Board either because they're deemed things the whole Board is going to want to talk about anyway. If we're going to

spend three hours talking about it, we might as well do that once rather than twice. Or in the case of this particular item for instance --

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STAFF COUNSEL BLOCK: -- where there isn't any appropriate Committee -- at the present time we don't have an Administration Committee, which we might have normally put this through. And, again, it's effecting Board procedures. So the thought was to have this go straight to the Board, rather than have it go to a Committee that has a slightly different topic.

So if it's the pleasure of -- even though these are not in Attachment 3, I've got the language up there. If that's okay with the Board, I'd like to add those in, if you give me that direction. Again, it's just reflecting our actual practice.

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STAFF COUNSEL BLOCK: I had one more of those. Likewise, another issue that was raised on Monday -- and this is really technical, but worth adding in. I added an entire section relating to reconsideration. And, fortunately, through the years, I think we only had to do it once. But one of the things I left out, because it's generally considered a given, is you can't reconsider a decision if you've already implemented part of it. So it

probably is worthwhile adding that bullet that you can see up on the screen in front of you for that.

And I think with that, I think that was all. I have had one other issue that was raised relating to pulling items from the consent agenda. And it's just more of a new idea. I'm not sure if --

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STAFF COUNSEL BLOCK: I'll show you what I kind of raised. There was some discussion the other day about -- and the procedures have always provided that pulling items from consent was done by the Chair or a Board member. And as a practical matter, when a member of the public has wanted something pulled from consent, that's essentially granted as a matter of course. But our procedures have never said that. This is some language -- it wasn't part of the original recommendation, but this is certainly some of the language that could be added. But, again, if that's the pleasure of the Board.

So with that, sorry to have raced through that. But I'm sure you all want to go get lunch as much as I do. We're looking for approval of the updated and revised version of the procedures, which is Attachment 3, and if it's the pleasure of the Board, those last four additional changes that I just talked about today.

CHAIRPERSON MARIN: Okay. Mr. Washington.

BOARD MEMBER WASHINGTON: Thank you, Madam Chair.

Elliot, just regarding the pulling items from the agenda, I notice on that one that it says that the Executive Director or the Board, are those the only ones that can pull items from the agenda?

STAFF COUNSEL BLOCK: Sorry. Okay. You're actually in --

BOARD MEMBER WASHINGTON: I'm in the actual --

STAFF COUNSEL BLOCK: Right. Hang on. Let me find that page. Attachment 3, and it is bottom of page 6. So it's the bottom of page 6, pulling items from the agenda.

BOARD MEMBER WASHINGTON: Yeah. Well, I was actually looking at the item itself. Agenda Item 2, and it would be on page 4.

STAFF COUNSEL BLOCK: Well, the language is written the way it's written to reflect -- and I zipped through that. We did have a number of other statutes and rules that govern our meeting procedures that exist outside of our procedures. So they haven't been incorporated here. It'd end up being a 40-page document, one of which is Bagley-Keene Act. So one of the issues that we run into from time to time with pulling items from the agenda, once an item goes on the agenda, the difficulty in having the item pulled once it's on the

agenda by the Board is that --

BOARD MEMBER WASHINGTON: Are you saying the Board itself or Board members?

STAFF COUNSEL BLOCK: By the Board. In other words, once the item is on the agenda, there's no mechanism, because of Bagley-Keene, for the Board itself to then pull the agenda item until it gets to the Board meeting. It obviously can be pulled at the Board meeting. But an Executive Director who you've delegated the authority to have staff do items, if he determines an item is not ready, it's not ready to go. It's not a Bagley-Keene decision because it's not a Board decision.

That's why that's phrased that way. It's a little bit awkward. But the problem is you can't have a Board vote until you get to the meeting to pull an item from the agenda. That's why it's phrased that way. There are some other potential ways you can do it.

BOARD MEMBER WASHINGTON: So a Board member -- a particular individual Board member can't pull the item from the agenda?

STAFF COUNSEL BLOCK: That's correct.

BOARD MEMBER MOULTON-PATTERSON: Before the meeting.

STAFF COUNSEL BLOCK: Before the meeting.

BOARD MEMBER MOULTON-PATTERSON: You can once.

BOARD MEMBER WASHINGTON: So an individual Board member at the Board meeting can pull it?

STAFF COUNSEL BLOCK: The practice has been -- because we have another provision that essentially says if a Board member -- any one Board member can ask that an item be put on the agenda, can request that. So the problem becomes once it gets on the agenda, and there's no mechanism for the Board as a whole to pull it or individual other than that one request, I guess. But if an item is on there, you end up having to have a vote, essentially. And typically what happens is it's a consensus if a member has requested an item be put off or continued for some reason. It typically works that way. And that's why the procedures are kind of written the way they are.

What if you had three Board members that want to hear it and three Board members that didn't? So, you know, but that situation doesn't happen in the context of prior to the meeting where the Executive Director who's, you know, directed staff to put it on in the first place, pulls it. So I hope I didn't make that more confusing.

BOARD MEMBER MOULTON-PATTERSON: On that item, my recollection has been that, you know, we did have some problems with this. And I think just Mike and I were here during the time. But we had something when it got to the

Board meeting that it was kind of -- didn't we call it a courtesy pull or something? That a Board member out of courtesy could pull it once without a vote. But then if they kept wanting to pull it, in other words to obstruct it from being heard, it had to go -- the second time to go to the vote of the full Board. Is that right; Mike?

BOARD MEMBER PAPARIAN: Yeah. That's been the practice.

BOARD MEMBER MOULTON-PATTERSON: I don't know if we want to put that in writing.

STAFF COUNSEL BLOCK: I can capture that. There's an example -- it's more talked about in the item than my rushed presentation today. That's within your choice to do. If you'd like to set the process up that way --

CHAIRPERSON MARIN: But you do have it here. The Board may pull any item at the meeting by consensus or a vote, if necessary. So --

STAFF COUNSEL BLOCK: Right. But that doesn't reflect I think what's just been said as the one courtesy pull. So we can certainly add that, if that's the pleasure of the Board. That's easy enough to do. I do remember some discussions around that now that you mention it, although I can't remember how it actually played out at the time.

CHAIRPERSON MARIN: Okay. Mr. Paparian, you still want to say something? Go ahead, Mr. Paparian.

BOARD MEMBER PAPARIAN: Just a couple quick things. I'm not sure it's in here that the Committee votes are recorded somewhere, noted, at least in the version that I had. I think it would be a good thing to include that the Committee votes ought to be recorded and in our system so people can go back and refer to those, especially if there's a split vote like we do with the full Board items.

STAFF COUNSEL BLOCK: That's easy enough to do. We can add some language along those lines.

And there's a couple of different ways we can do this. If you want to direct me to add some of these additional things, and certainly we can put this off and do another item next month. Or since, again, it's something obviously I'll write up and send to all of you, I could simply do it, circulate it. And if there's a problem, you could direct me to bring the item back. But if I've captured your wishes, it would be one less item next month.

CHAIRPERSON MARIN: That's right.

Ms. Peace wants to say something.

BOARD MEMBER PEACE: On this one that's on the screen it says "to remove an item from the consent agenda,

the Chair, the individual Board member, or a member of the public shall make a request that the item be pulled." If they make a request that the item be pulled from the consent agenda, who says yes, we're going to do it or no we're not going to do it? Is that left up to the Chair, or do all of us --

STAFF COUNSEL BLOCK: No. Actually, as this particular one is written, as long as the request is made --

BOARD MEMBER PEACE: It would be pulled?

STAFF COUNSEL BLOCK: It would be pulled from the consent agenda, essentially so that the person would have an opportunity to speak. The existing language says --

BOARD MEMBER PEACE: This said any member of the public, not any Board member.

BOARD MEMBER MOULTON-PATTERSON: That's law, isn't it?

STAFF COUNSEL BLOCK: This is just consent agenda. The discussion we were having about the courtesy pull was to pull it from the agenda completely and put it off for a month. This is just simply pulling it off the consent agenda.

And right, as a courtesy, any time this has come up, the Board has never not allowed somebody to speak on an item. So this is simply reflecting that.

BOARD MEMBER PEACE: Also, are you still saying we should follow the rule that any item involving -- any fiscal item or item that needs an approval for a neg deck or EIR still not go on the consent?

STAFF COUNSEL BLOCK: The way that this is phrased now -- and, again, as you can imagine, with this many rules -- when I first started writing this, I started writing options, and suddenly I had a 30-page item, because you could have two or three options for these ten things. So all I did in this particular case -- and this would be page 3 of the item -- is reflected what we believe is the current Board practice, which is fiscal items were not eligible for consent, and those where the Board itself is actually the lead agency adopting a negative declaration or EIR.

The issue has come up last month or the month before about permits. But when we did look -- and I think it was discussed then. We did look back. We had regularly allowed permit items that weren't controversial to be on the consent agenda. That's why you don't see them here.

But, again, this is your procedure. So it's ultimately your decision as to how you want the meetings to run. Legally, permit concurrence are still decisions of the Board. They can be on the consent agenda. And,

actually, to be honest with you, both of these decisions could actually also be on the consent agenda if you wanted. It hasn't been the Board practice up until now.

What I did to try to keep this from being even more complex than it's already gotten is to not mix and match too much, because then there's just a lot of choices and it gets very complicated.

So, yeah. Right now Attachment 3 as you've got it, fiscal items, and where we're the lead agency would still not be eligible for the consent agenda. All other things would be if they meet the other requirements, they're routine or not controversial or unanimous.

BOARD MEMBER PEACE: Only where the Board is the lead agency on a neg dec or an EIR that we would put it on consent?

STAFF COUNSEL BLOCK: That's right.

BOARD MEMBER PEACE: So if the LEA was the lead agency --

STAFF COUNSEL BLOCK: In other words, where we're actually adopting the negative declaration or certifying the EIR. So for regulations we do that. And occasionally -- very occasionally on permits we've done that. Typically, when we're the responsible agency, when we're relying on somebody else's document, but we're not adopting that CEQA, certifying the EIR, for instance. So

those we have -- and you'll notice those when you see agenda titles, sometimes you'll have an agenda title that includes adoption of negative declaration and adoption of regs. Those are the items that wouldn't go on consent. But permit items involve CEQA, but we're not actually adopting the document in those.

BOARD MEMBER PEACE: Okay. Also, there was something else that came up in my Committee on Item 11. We had made some changes to it and we put it on consent. But even if we hadn't put it on consent, we didn't get a revised item. So I think that kind of left some of the other Board members that weren't on the Committee in the dark as to what had happened. I was just trying to figure out how -- I think maybe to clarify the agenda items that are modified as a result of Committee action that they should have some sort of a formal revised item prepared.

STAFF COUNSEL BLOCK: I know that's typically our practice. We have revised items occasionally. We have some timing issues. But I don't have explicit language for that in here. I could do that, if that's --

CHAIRPERSON MARIN: Julie, what happened?

CHIEF DEPUTY DIRECTOR NAUMAN: That hasn't been included in our procedures in the past, and I think it's handled on a case by case basis. I think where there's a very short time turn around, staff has not always prepared

a revised item. I think it's up to perhaps the Chair of the Committee if he or she thinks the changes are substantial enough and may need to have more public hearings. We can certainly do our best to prepare a quick revision. The other option may be not to put the item on the consent if it's still that fluid in your mind.

BOARD MEMBER PEACE: Even if we didn't put it on consent, it was still going to the full Board. And I don't think all the other Board members realized maybe all the things we had discussed and changed at the Committee meeting. How would they know when it got to the full Board and didn't put it on the consent and they're looking at the item and we had changed quite a few things in the Committee. And how would Board members be aware that we made those changes?

CHIEF DEPUTY DIRECTOR NAUMAN: That's a good issue. I think we probably should have some further discussion about that. Particularly if it's the unanimous position of the Committee, then the item probably should be revised. Whether you include that in these procedures or not is your choice. But that can be our administrative procedure to do that. And in most cases we have sufficient time to do that.

CHAIRPERSON MARIN: It was just this one particular. Okay.

BOARD MEMBER PAPARIAN: Just to add to that. I agree that there's an issue there also for the public. If something is substantially changed or someone doesn't know it's been changed, they don't know there's something they may want to comment on. I think it's particularly important to be sensitive to that.

CHAIRPERSON MARIN: That's a very good comment on that.

BOARD MEMBER PEACE: I'd like to add to that. Can we make sure that all revised items should have some type of formal revision so the public and the rest of the Board members know what's going on?

CHAIRPERSON MARIN: That's what he just said.

BOARD MEMBER WASHINGTON: Madam Chair.

CHAIRPERSON MARIN: This is it from you, Mr. Block?

STAFF COUNSEL BLOCK: Well, I don't have any more presentation.

BOARD MEMBER WASHINGTON: But I have a question.

CHAIRPERSON MARIN: Okay. Another question, Mr. Washington.

BOARD MEMBER WASHINGTON: In terms of this particular item, I want to make sure I'm clear on this item here. It says, "To remove an item from the consent agenda, the Chair or an individual" -- the concern is that

make a request. What does that mean when you say make a request? I can request it be pulled, but it doesn't mean it's going to happen?

STAFF COUNSEL BLOCK: In the context of what's on the Board, which is just pulling it from the consent agenda to have discussion, it's simply that. In other words, one of the members of the Board or the Chair raises their hand and said, "I would like this item pulled from consent," which is what we do now. And if it's a member of the public, they would presumably submit a speaker slip or a note to go to the Chair to request it be pulled.

CHAIRPERSON MARIN: It doesn't mean it's not going to be heard. It means it's going to be heard separately.

BOARD MEMBER WASHINGTON: I'm saying the word "request." If that's the case, why doesn't it say that an individual or Board member wants an item pulled from the agenda -- the word "request," is the thing I'm trying to stick here a second and figure out what does that really mean. If I'm the Chair of this Board and you have an agenda item that I want to stay on consent and I don't want it pulled off consent, that word "request" as Chair of the Board, can I say, no, I'm not going to pull it off consent and move on?

STAFF COUNSEL BLOCK: Request does imply there

can be a no. I can play with that language and --

BOARD MEMBER WASHINGTON: That's what I'm trying to say.

STAFF COUNSEL BLOCK: As it's written, it's meant to be removed as a matter of course.

BOARD MEMBER WASHINGTON: As you know, no matter how you write sometimes, the public can come and say, no, I'm requesting. And, I mean, you just want to get beyond that part. So I think that word "request" is a stickler in terms of how we fix that. If I want an item pulled, that I will get that item pulled from the consent.

STAFF COUNSEL BLOCK: In terms of my intent in writing it and the understanding I think I've gotten from the Board, it's really from the consent agenda a matter of course. I can wordsmith that to make sure it reflects that intent, if that's what you want.

CHAIRPERSON MARIN: So do we need to bring this back for final approval, or do we assume -- or if everybody agrees that we will give direction that he will take it, it doesn't really need to come back to the Board, unless somebody feels as revised that that was not the intent of what we said here. Would that be fine with the Board? Okay.

Further discussion? Any further discussion?

BOARD MEMBER PEACE: Just to clarify in my mind.

Are we saying permits can go on consent?

CHAIRPERSON MARIN: Yes.

STAFF COUNSEL BLOCK: Yes.

BOARD MEMBER PEACE: And everybody is okay with that?

STAFF COUNSEL BLOCK: So there is a resolution that we're requesting.

So just to make sure. So I've got a list of four and then three more items. I don't know if you want me to go through them or just trust me to capture them all. I will revise this, circulate it. And obviously let me know if I captured something incorrectly. I'll be coming back before you with another item. But assuming I captured everything correctly, we can move forward.

CHAIRPERSON MARIN: Let me just finish by saying that because the Chair assigns the Committee Chairs and so forth, and for the next -- my understanding is that we have a deadline as of today at 5:00 o'clock, if there are any changes to Committee Chairs, that it needs to be done before this meeting is over. So it was my great privilege to be the Chair of the Permitting and Enforcement Committee. But since now I have assumed a new role, it is my great pleasure to appoint Rosalie Mulé as the Chair of Permitting and Enforcement, if she so accepts.

BOARD MEMBER MULÉ: I accept. Thank you very

much, Madam Chair. Looking forward to working with the other Committee members.

BOARD MEMBER WASHINGTON: Shouldn't that have been put on the agenda?

CHAIRPERSON MARIN: No. The Chair can so wish.

Okay. Just to close, I want to thank everybody. And I don't want this day to go without acknowledging the graciousness of the former Chair, and I know we're going to work together. And thank all my Board colleagues. You guys really helped me out a lot, and I really appreciate it. And thank staff for all their work. I'm looking forward to the next four years.

So the last thing -- my wonderful staff. One of the things that I'm going to request of the next agenda is to move the public comment to be at the very, very beginning of the agenda. Because I'm sure that right now this would be the time to have the public comment on anything about this Board. But literally there is no more public. So as a courtesy to the state of California, we may or may not have any public comment at the beginning, but we will change that.

And, Julie, will you make sure that that reflects the agenda item?

CHIEF DEPUTY DIRECTOR NAUMAN: I will. I'm looking over at Deb McKee. She's got the October agenda

just ready to go to print. If we can make that change for October, we certainly will. But it's always your prerogative to move that around. I don't know if we can make it for October, but we will certainly try.

CHAIRPERSON MARIN: Do your best. If not, I will understand. And we will reflect the change as of the next time.

Do we have a member of the public that wishes to --

STAFF COUNSEL BLOCK: We actually haven't voted on the resolution yet.

CHAIRPERSON MARIN: Thank you. So there is a resolution to adopt. It was -- go ahead. I thought it was by consensus, but go ahead.

BOARD MEMBER MULÉ: I thought we had to move this. I would like to move approval of Resolution 2004-247, Consideration of Updates and Additional Revisions to Procedures for Conducting Board and Committee Activities.

CHAIRPERSON MARIN: Okay. Is there a second?

BOARD MEMBER PAPARIAN: Second.

CHAIRPERSON MARIN: Mr. Paparian. Okay. Ms. Mulé a motion, and Paparian seconded for Resolution 2004-247.

Call the roll, please.

EXECUTIVE ASSISTANT JIMINEZ: Mulé?

BOARD MEMBER MULÉ: Aye.

EXECUTIVE ASSISTANT JIMINEZ: Paparian?

BOARD MEMBER PAPARIAN: Aye.

EXECUTIVE ASSISTANT JIMINEZ: Peace?

BOARD MEMBER PEACE: Aye.

EXECUTIVE ASSISTANT JIMINEZ: Washington?

BOARD MEMBER WASHINGTON: Is that with the changes?

CHAIRPERSON MARIN: Yes.

BOARD MEMBER WASHINGTON: So it should be amended to reflect the changes that were requested?

CHAIRPERSON MARIN: Yes.

BOARD MEMBER WASHINGTON: If that's the case, Washington aye.

EXECUTIVE ASSISTANT JIMINEZ: Moulton-Patterson?

BOARD MEMBER MOULTON-PATTERSON: Aye.

EXECUTIVE ASSISTANT JIMINEZ: Marin?

CHAIRPERSON MARIN: Aye.

And the last agenda item is public input.

MR. KAPUSUK: Thank you, Madam Chair and members of the Board. Again, for the record, Gerard Kapusuk, Ventura County Environmental and Energy Resources Department.

The reason I wanted to spring up at your public

comment is I forgot to make a very important announcement with respect to the programs in our department. And that is, of course, our environmental preferred procurement program. I just want to call for the Chair's attention in particular. When we decided to pursue that program, it resulted in the reduction of toxic materials and more importantly nearly a million dollars in cost savings at our county departments and substituting recycled content as the default choices for the hundreds of procurement decisions made throughout the day in the county.

We were looking for an appropriate symbol on our website to highlight that program. And we took, of course, that conventional chasing recycle symbol, but we decided to substitute dollar bills for the chasing recycling to make the connection there are different levels of green. And for the Chair's benefit in particular, I made a critical point that when we could focus on this, we needed to get the precision such we could capture her signature on those dollars in order to make the point. We're not quite there yet, but we're working on that. Hopefully, one day we'll be able to announce that. But I did miss that in my point and I did want to make that.

And thank for your courtesy from a member of local government. And you're an extraordinary Board to

work with, and your staff is a reflection of that extraordinary partnership. And we hope to do even greater things in partnership with you.

CHAIRPERSON MARIN: Thank you so much. Thank you.

Thank you, ladies and gentlemen. We'll see you next Board meeting. Thank you.

(Thereupon the California Integrated Waste Management Board, Board of Administration adjourned at 1:25 p.m.)

CERTIFICATE OF REPORTER

I, TIFFANY C. KRAFT, a Certified Shorthand Reporter of the State of California, and Registered Professional Reporter, do hereby certify:

That I am a disinterested person herein; that the foregoing hearing was reported in shorthand by me, Tiffany C. Kraft, a Certified Shorthand Reporter of the State of California, and thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said hearing nor in any way interested in the outcome of said hearing.

IN WITNESS WHEREOF, I have hereunto set my hand this 6th day of October, 2004.

TIFFANY C. KRAFT, CSR, RPR
Certified Shorthand Reporter
License No. 12277